

A hypothetical study using fake data to map K10 psychological distress and SOFAS functioning measures toAQoL-6D health utility using data from a sample of young people presenting to primary mental health services

Catalogue of models

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This algorithm authored report summarises a number of longitudinal models for predicting AQOL-6D (weighted total) at two time-points. The descriptions of each model included in the report detail model predictor variables, parameter values and predictive performance. Report figures graphically illustrate the predictive performance of models when mean or sampled parameter values are used, with and without transformation of model outputs to enforce within range predictions. A number of these plots compare the performance of predictions when the original R model object (of class *brmsfit*) is used or when predictions are made from a summary table of model coefficients. Each model description also includes a catalogue reference number that is useful for retrieving the model data required to make predictions.

1 K10 generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)). The catalogue reference for this model is K10_1_GLM_GSN_LOG.

Table 1: K10 generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3996)							
sd(Intercept)	0.03	0.02	0.00	0.08	1.01	362	873
Population-Level Effects:							
Intercept	0.28	0.02	0.25	0.31	1.00	11 010	6 555
K10_scaled	-3.30	0.06	-3.42	-3.18	1.00	8 863	6 392
Family Specific Parameters:							
sigma	0.17	0.00	0.17	0.18	1.00	859	1 392

Formula: AQOL6D ~K10_scaled + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 2: K10 generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.44	0.01	0.415 , 0.469
RMSE	0.24	0.00	0.24 , 0.245

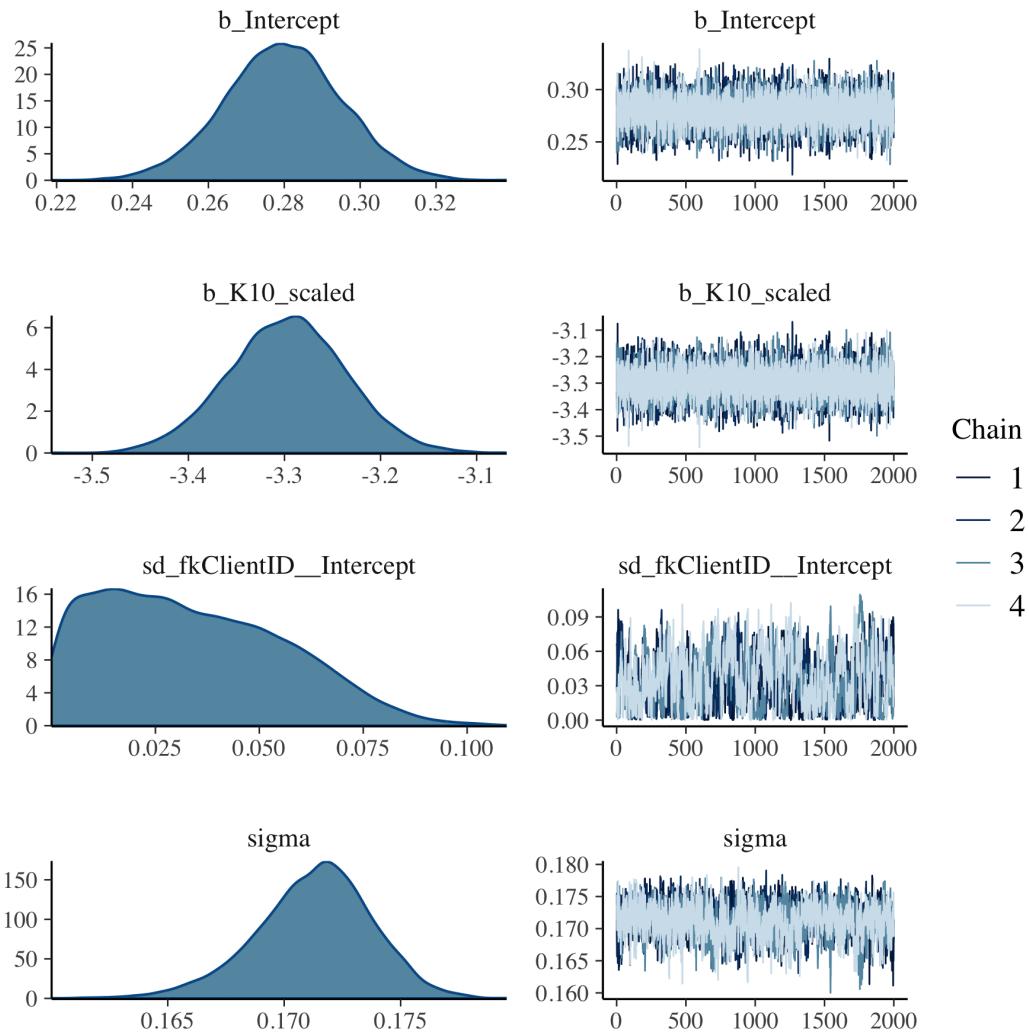


Figure 1: K10 generalised linear mixed model with Gaussian distribution and log link population and group level effects

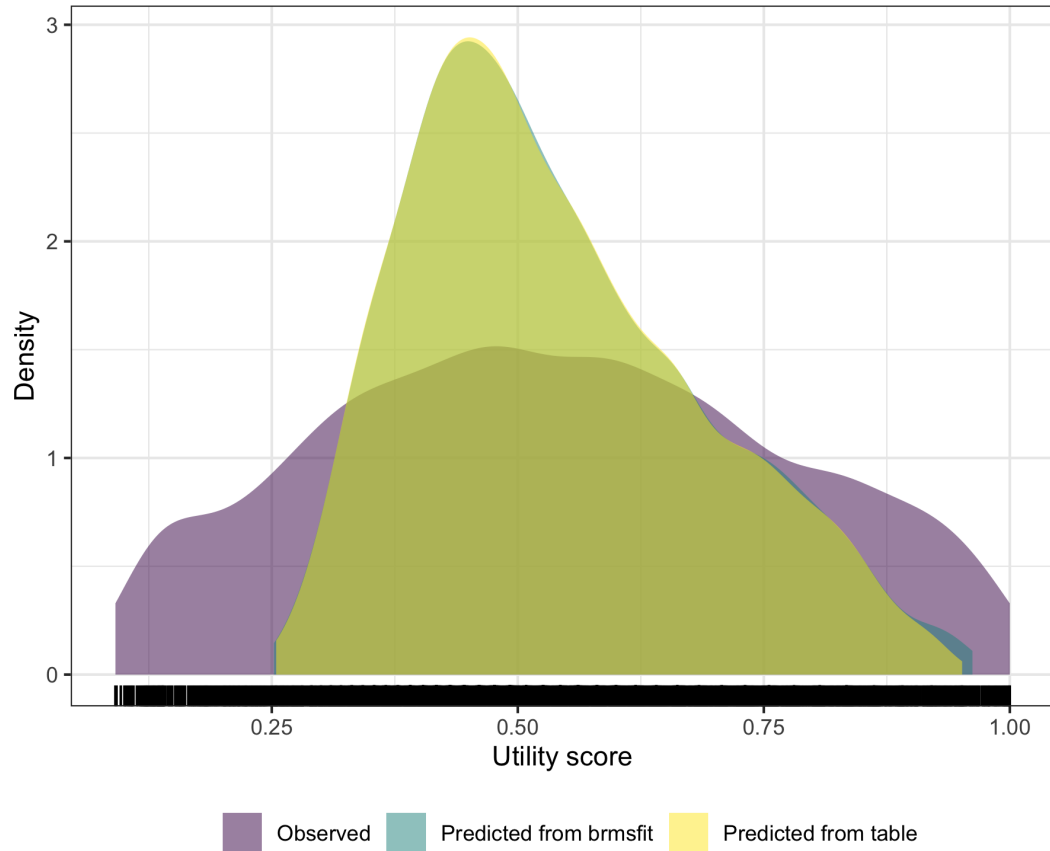


Figure 2: K10 generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

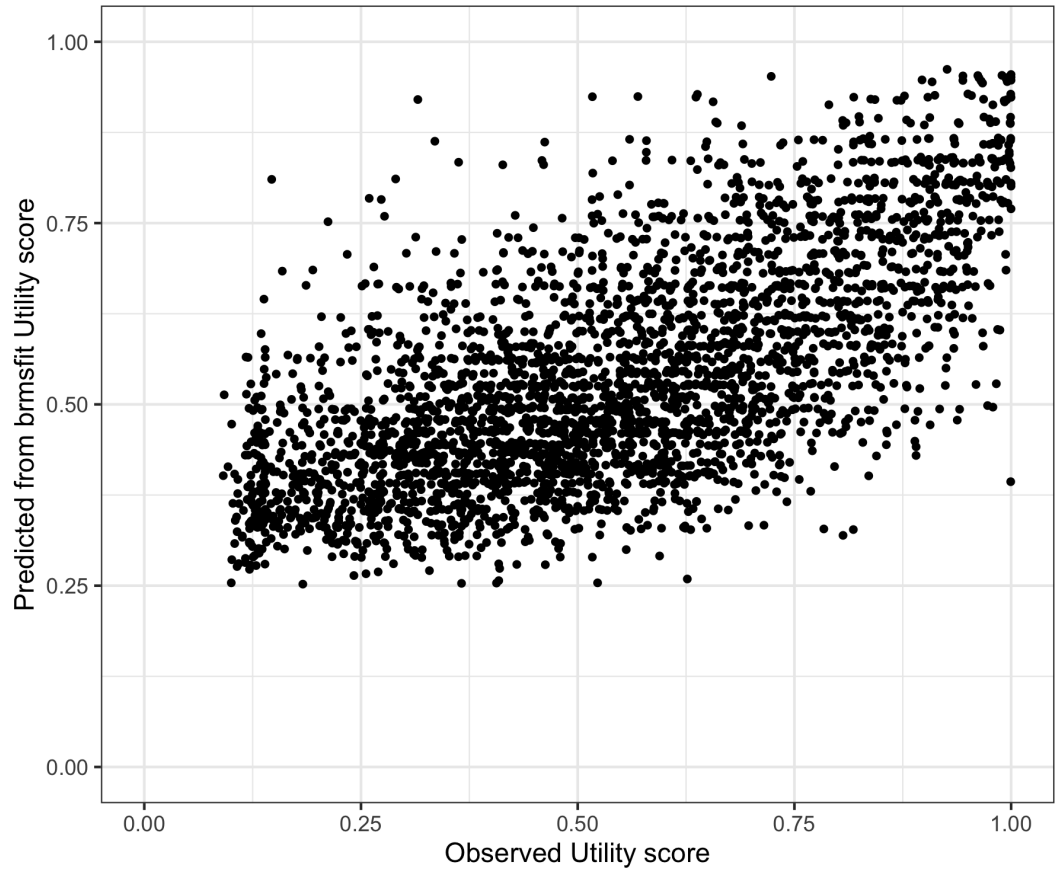


Figure 3: K10 generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

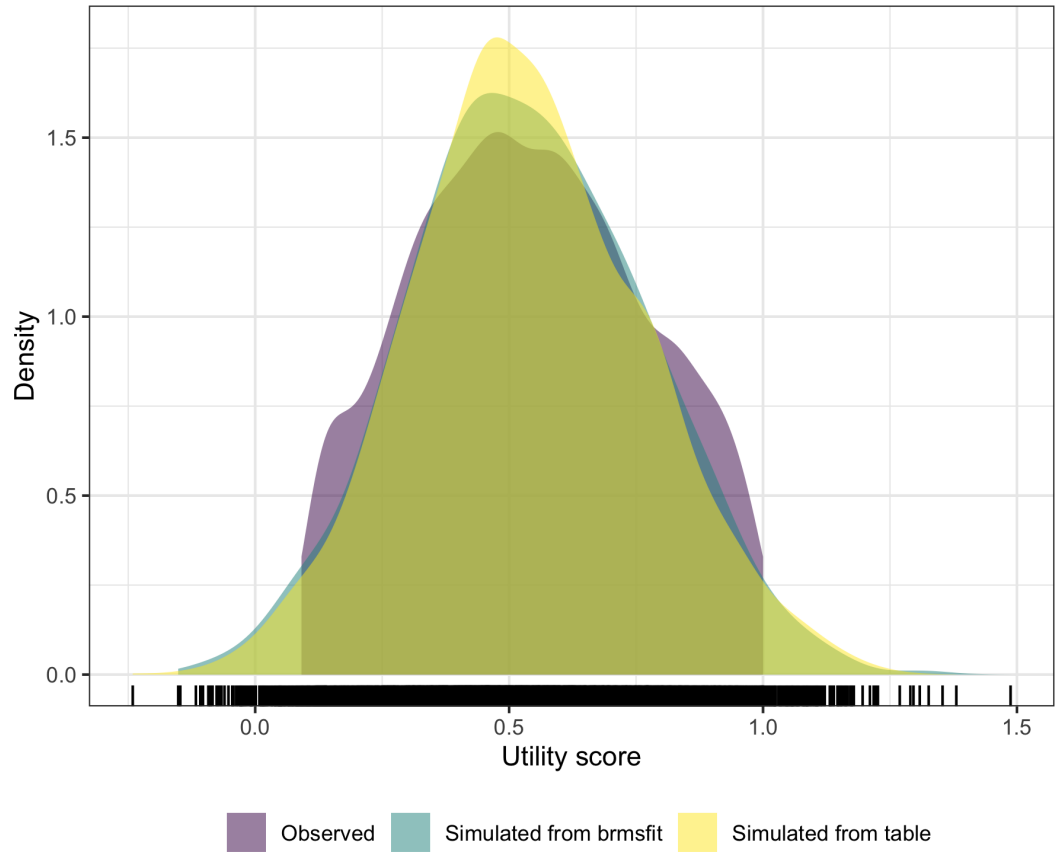


Figure 4: K10 generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

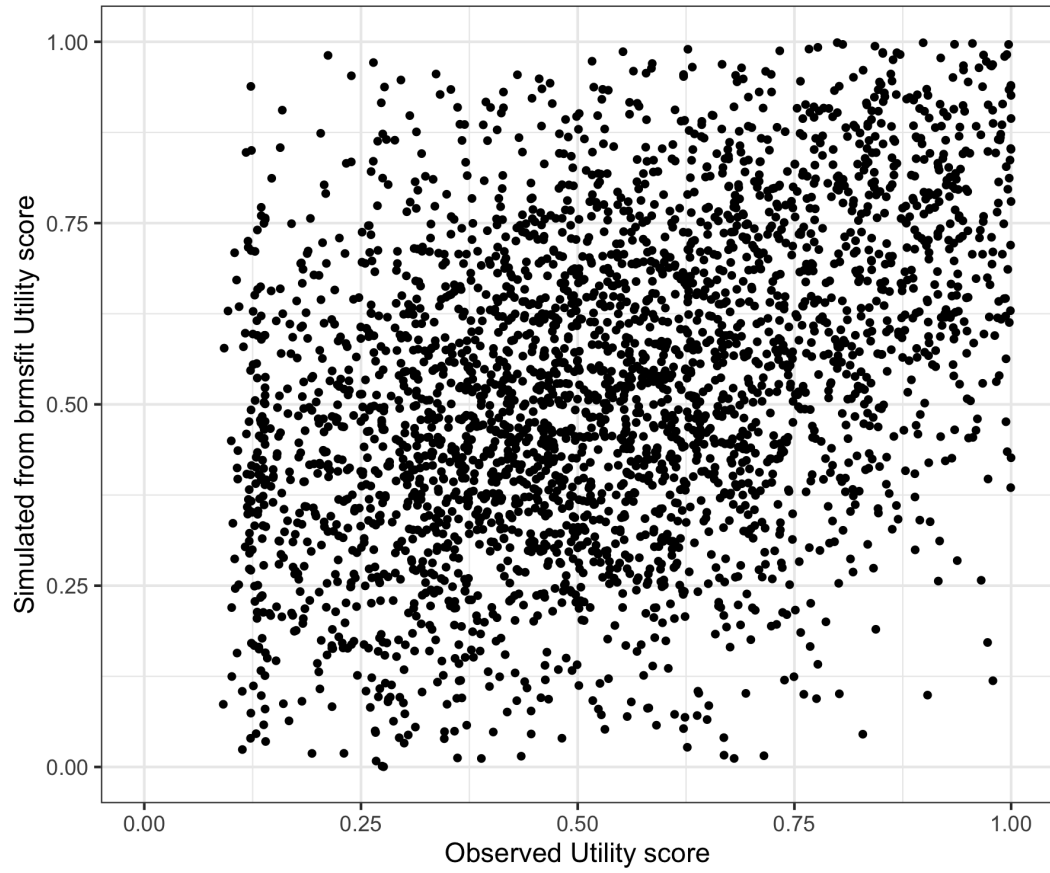


Figure 5: K10 generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

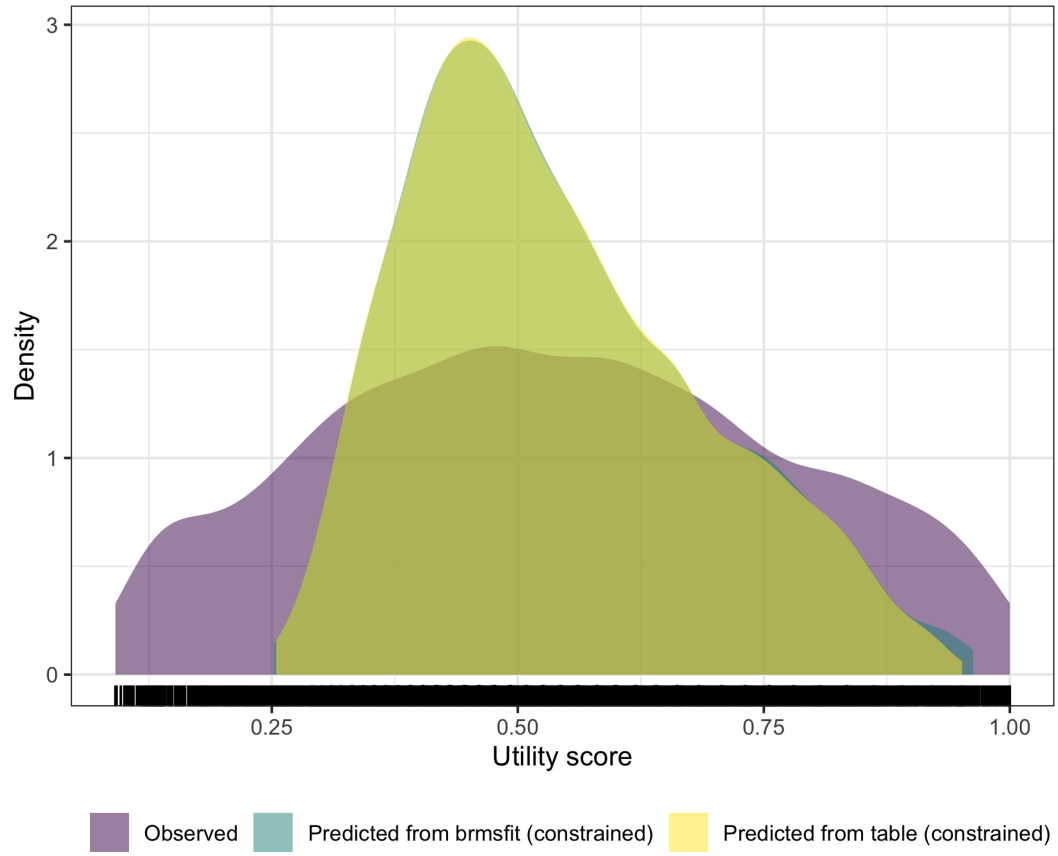


Figure 6: K10 generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

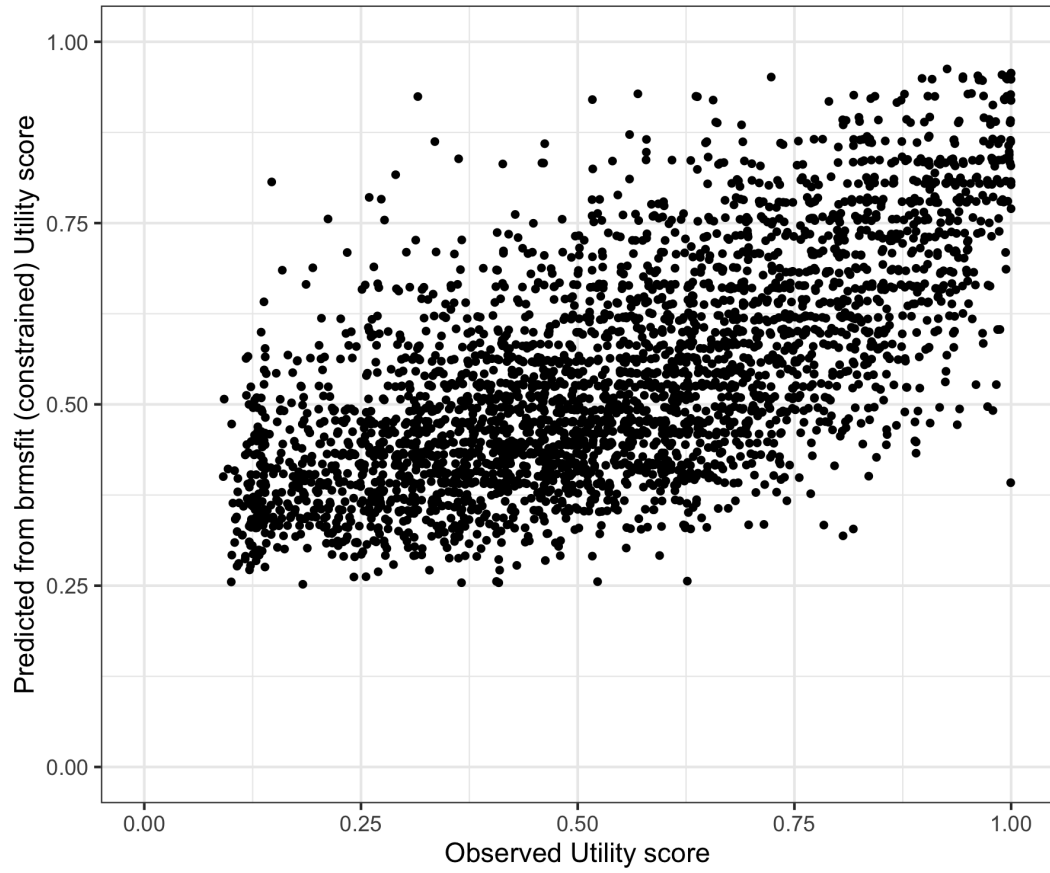


Figure 7: K10 generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

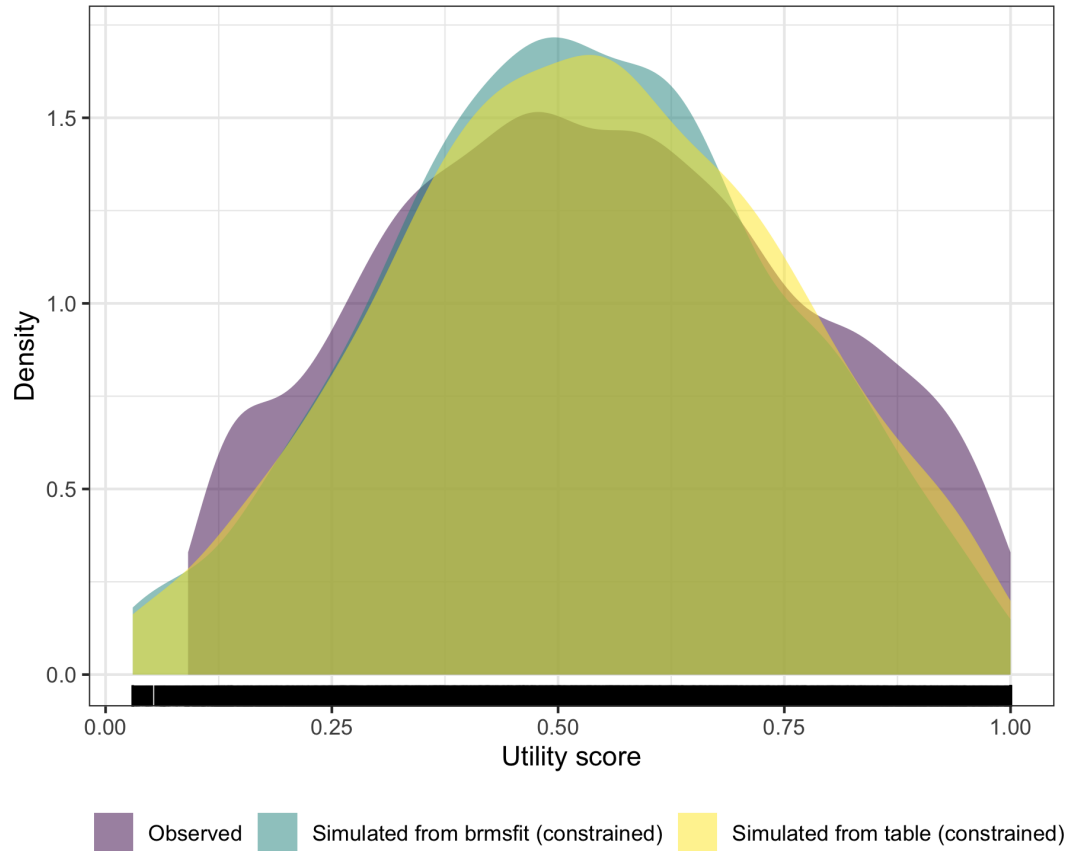


Figure 8: K10 generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

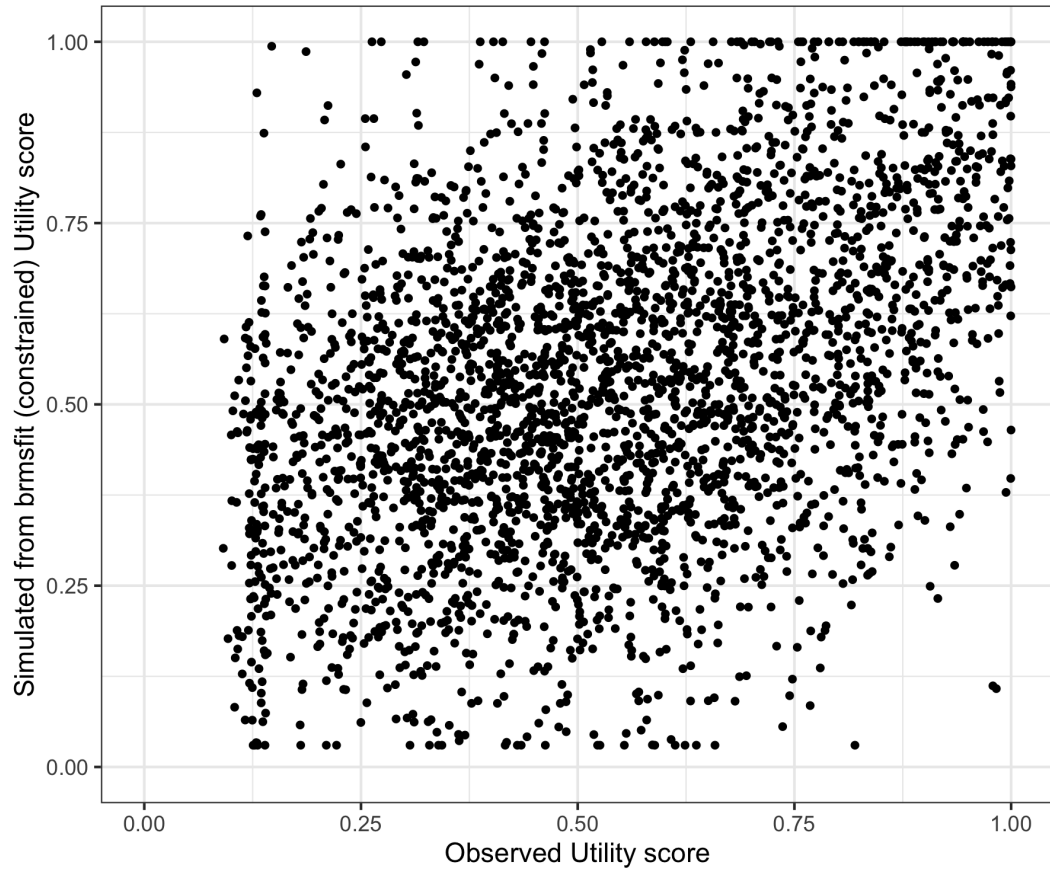


Figure 9: K10 generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

2 K10 linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)). The catalogue reference for this model is K10_1_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 3: K10 linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3996)							
sd(Intercept)	0.30	0.16	0.02	0.57	1.56	7	11
Population-Level Effects:							
Intercept	1.44	0.03	1.37	1.50	1.00	5 098	5 208
K10_scaled	-6.11	0.11	-6.34	-5.89	1.00	5 201	5 687
Family Specific Parameters:							
sigma	0.48	0.12	0.19	0.61	1.55	7	11

Formula: AQOL6D_CLL ~K10_scaled + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 4: K10 linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.61	0.16	0.414 , 0.941
RMSE	1.08	0.03	1.058 , 1.104

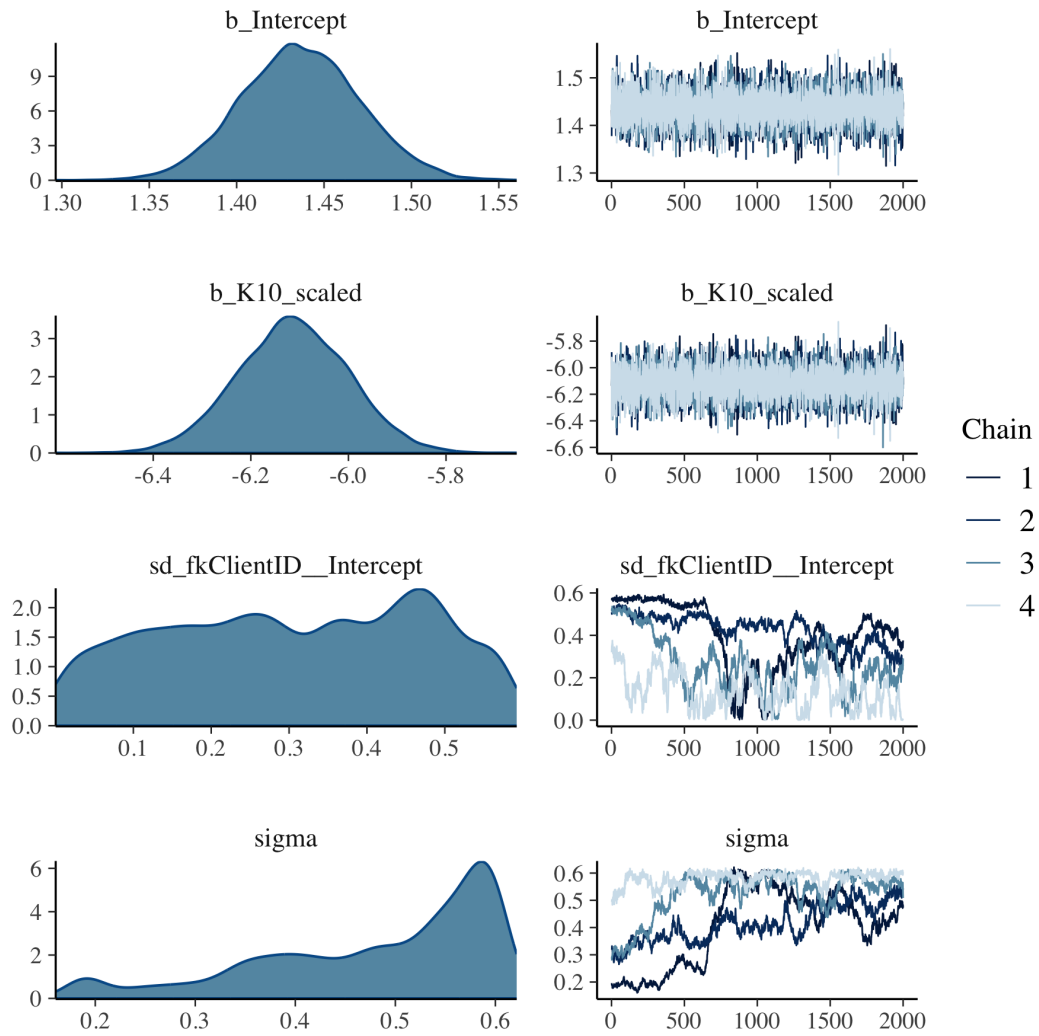


Figure 10: K10 linear mixed model with complementary log log transformation population and group level effects

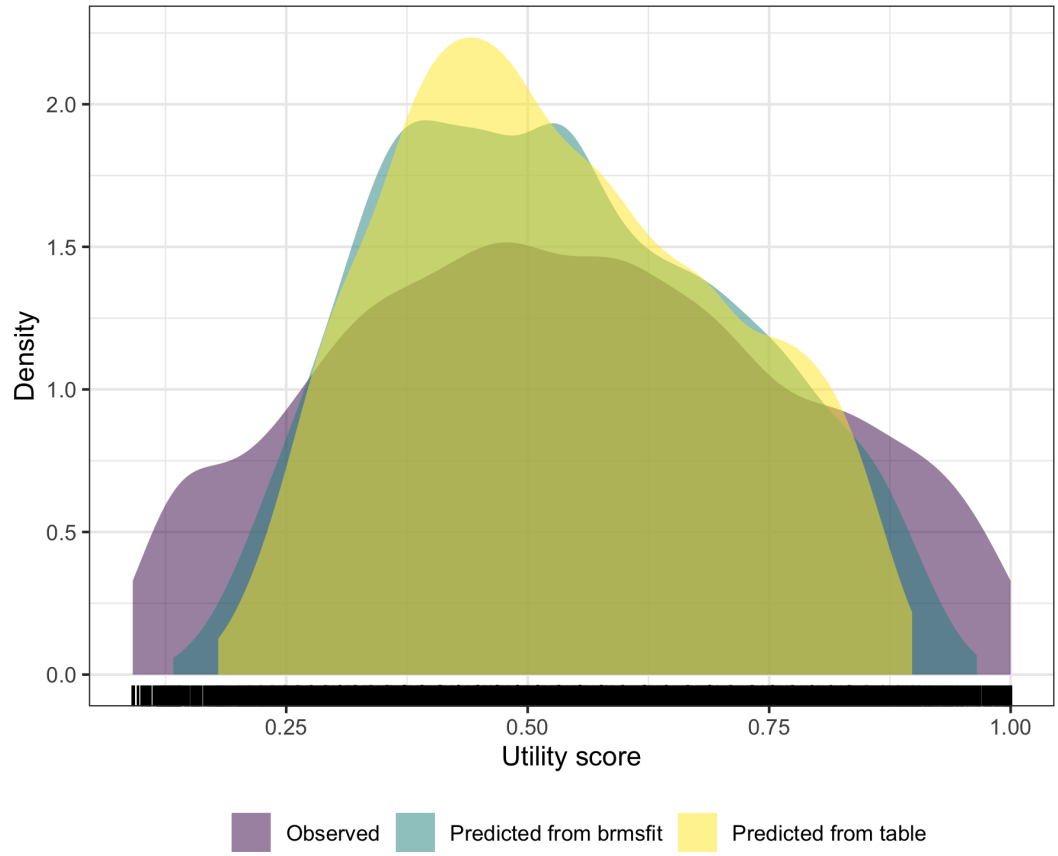


Figure 11: K10 linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

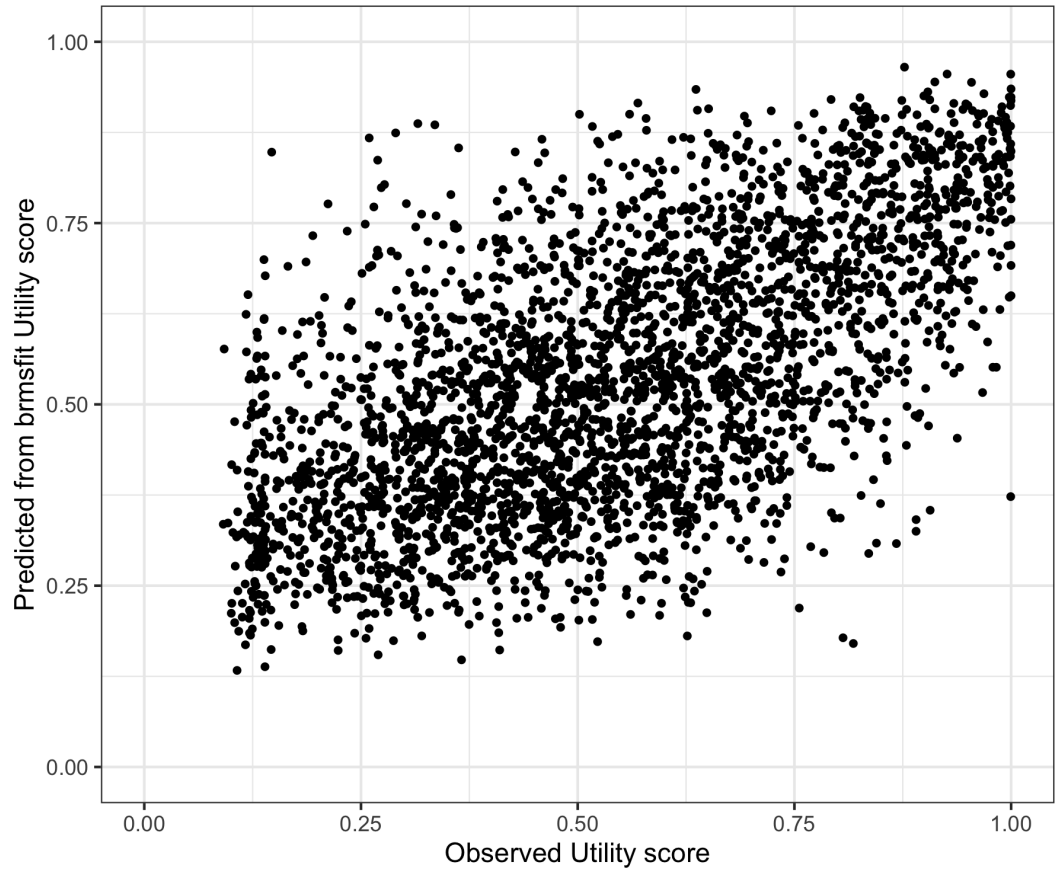


Figure 12: K10 linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

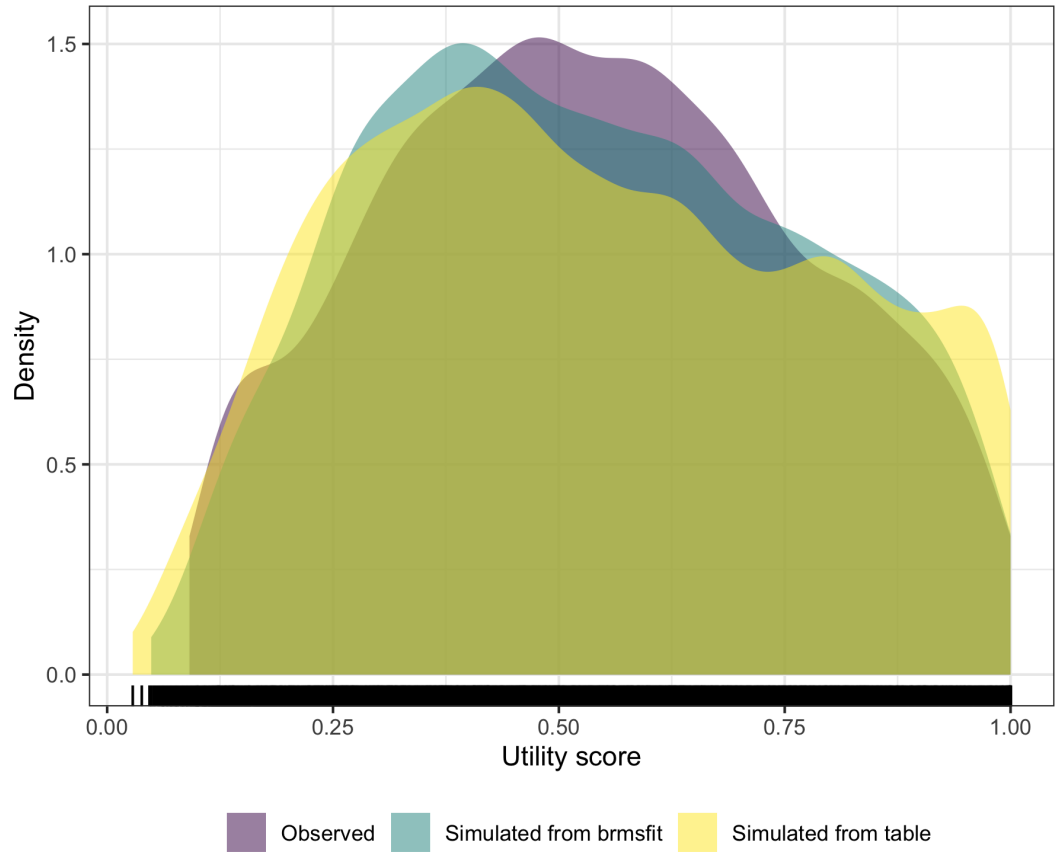


Figure 13: K10 linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

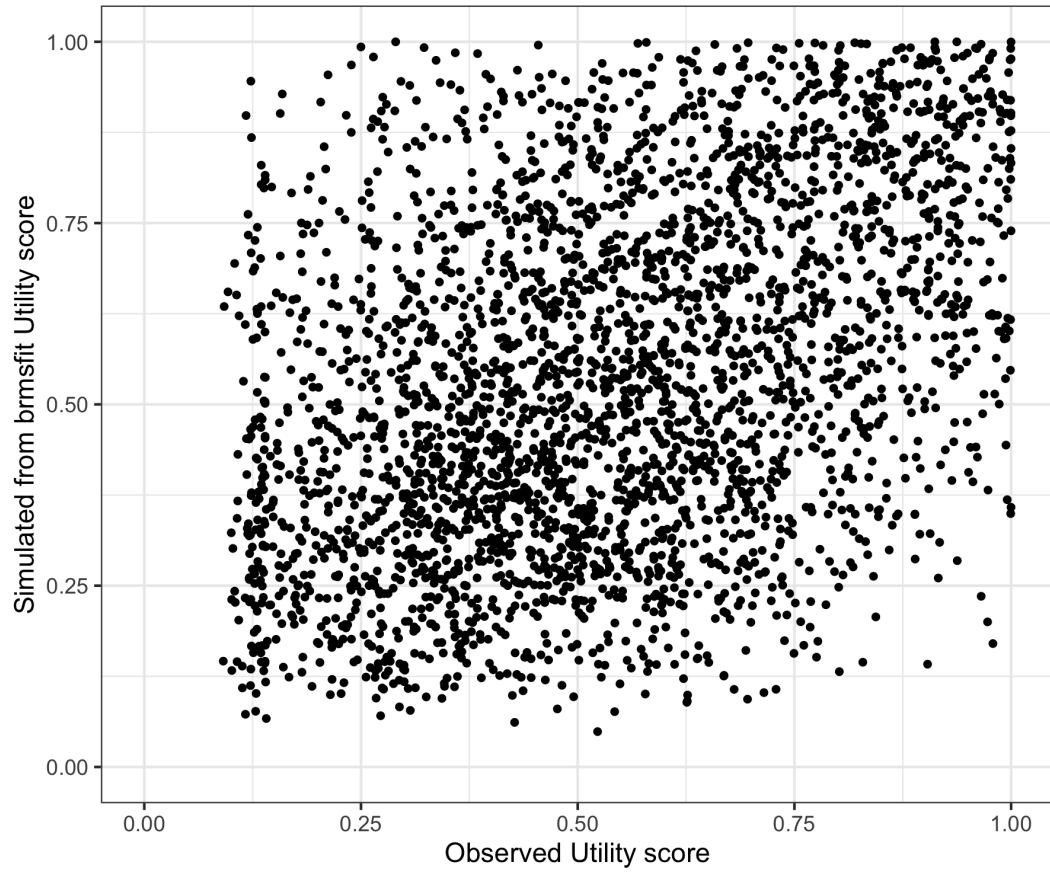


Figure 14: K10 linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

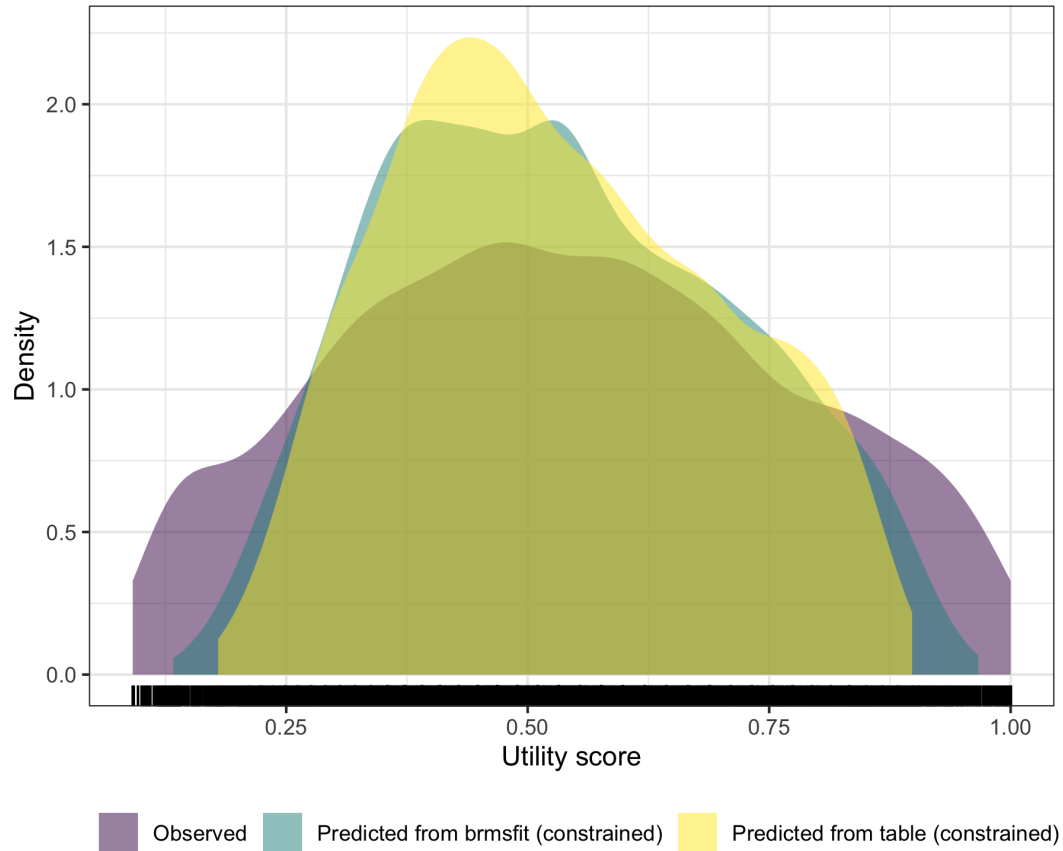


Figure 15: K10 linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

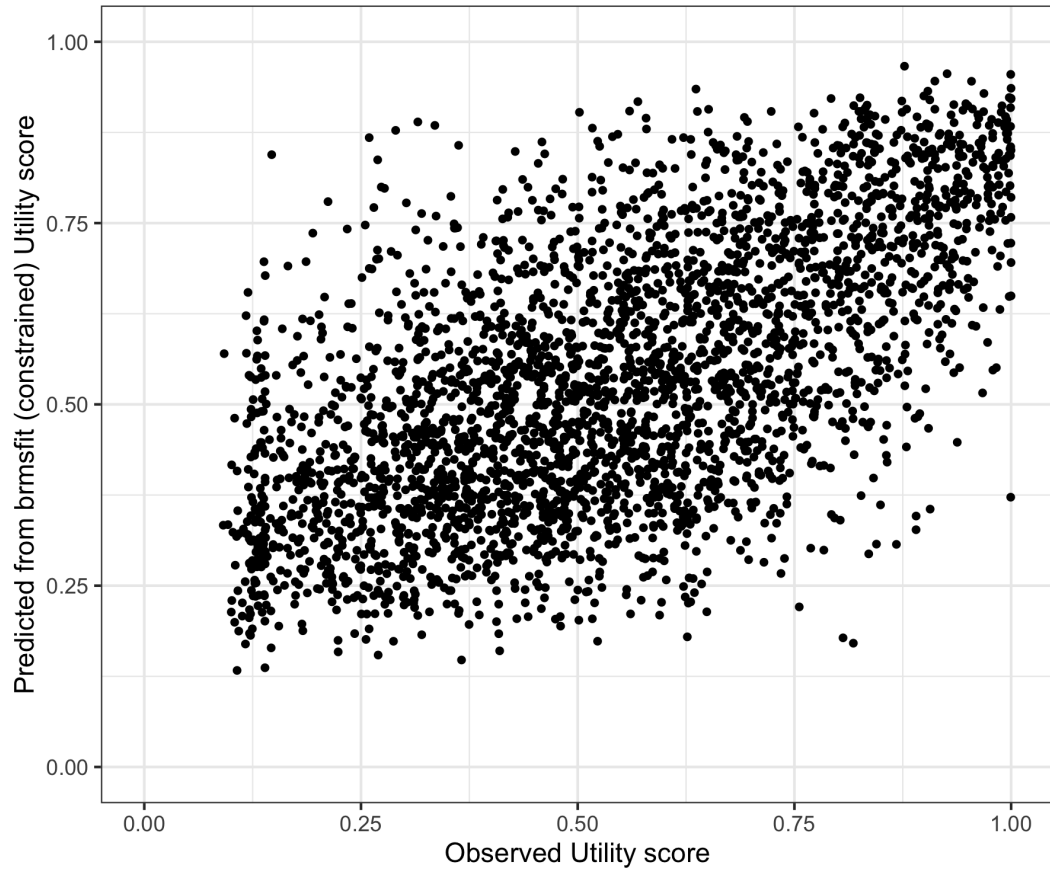


Figure 16: K10 linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

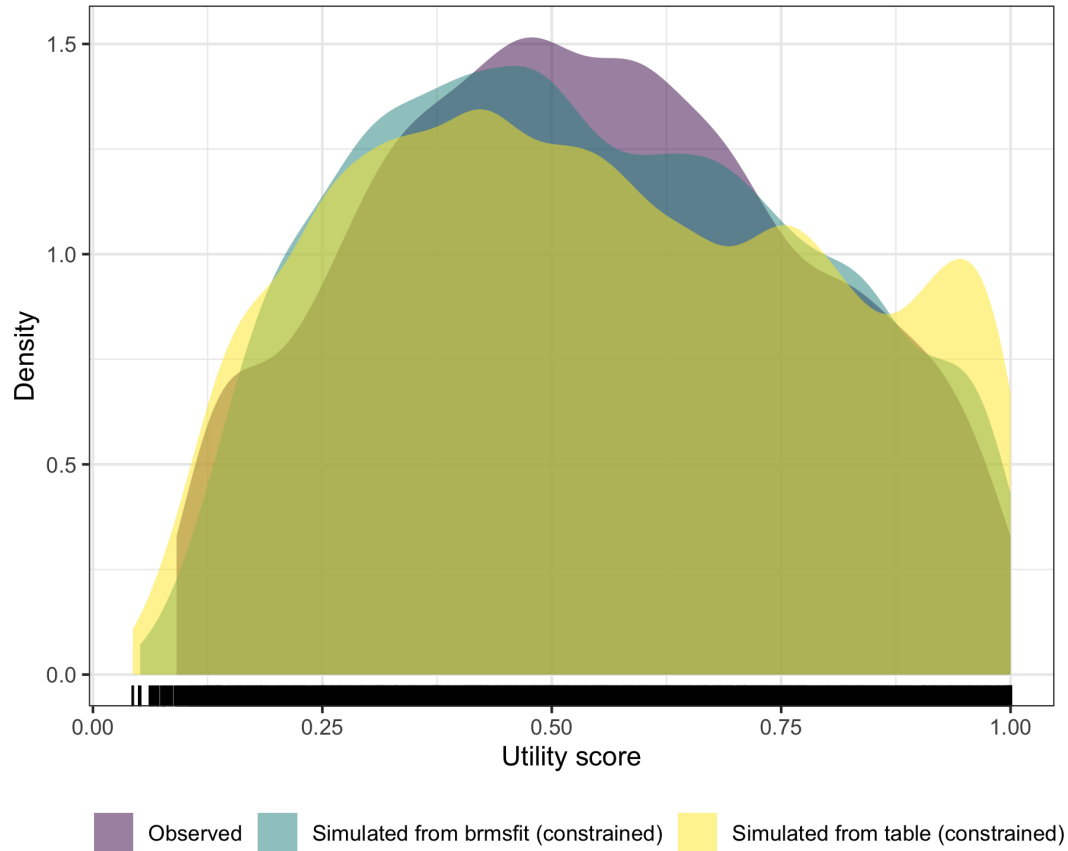


Figure 17: K10 linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

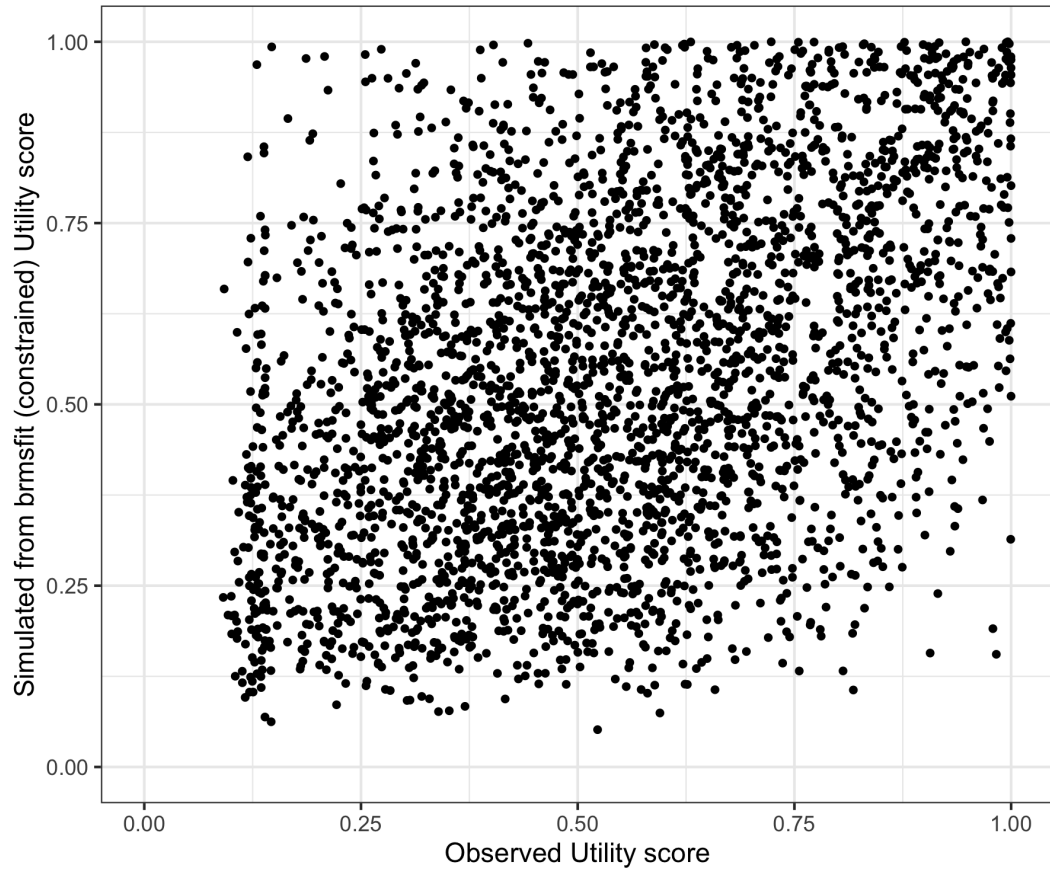


Figure 18: K10 linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

3 SOFAS generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)). The catalogue reference for this model is SOFAS_1_GLM_GSN_LOG.

Warning: There were 20 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warning>

Table 5: SOFAS generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3298)							
sd(Intercept)	0.07	0.04	0.00	0.16	1.02	161	300
Population-Level Effects:							
Intercept	-1.05	0.04	-1.13	-0.97	1.00	11 205	5 726
SOFAS_scaled	0.65	0.06	0.54	0.77	1.00	8 287	5 510
Family Specific Parameters:							
sigma	0.22	0.01	0.21	0.23	1.01	229	357

Formula: AQOL6D ~SOFAS_scaled + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 6: SOFAS generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.08	0.04	0.038 , 0.183
RMSE	0.31	0.01	0.308 , 0.317

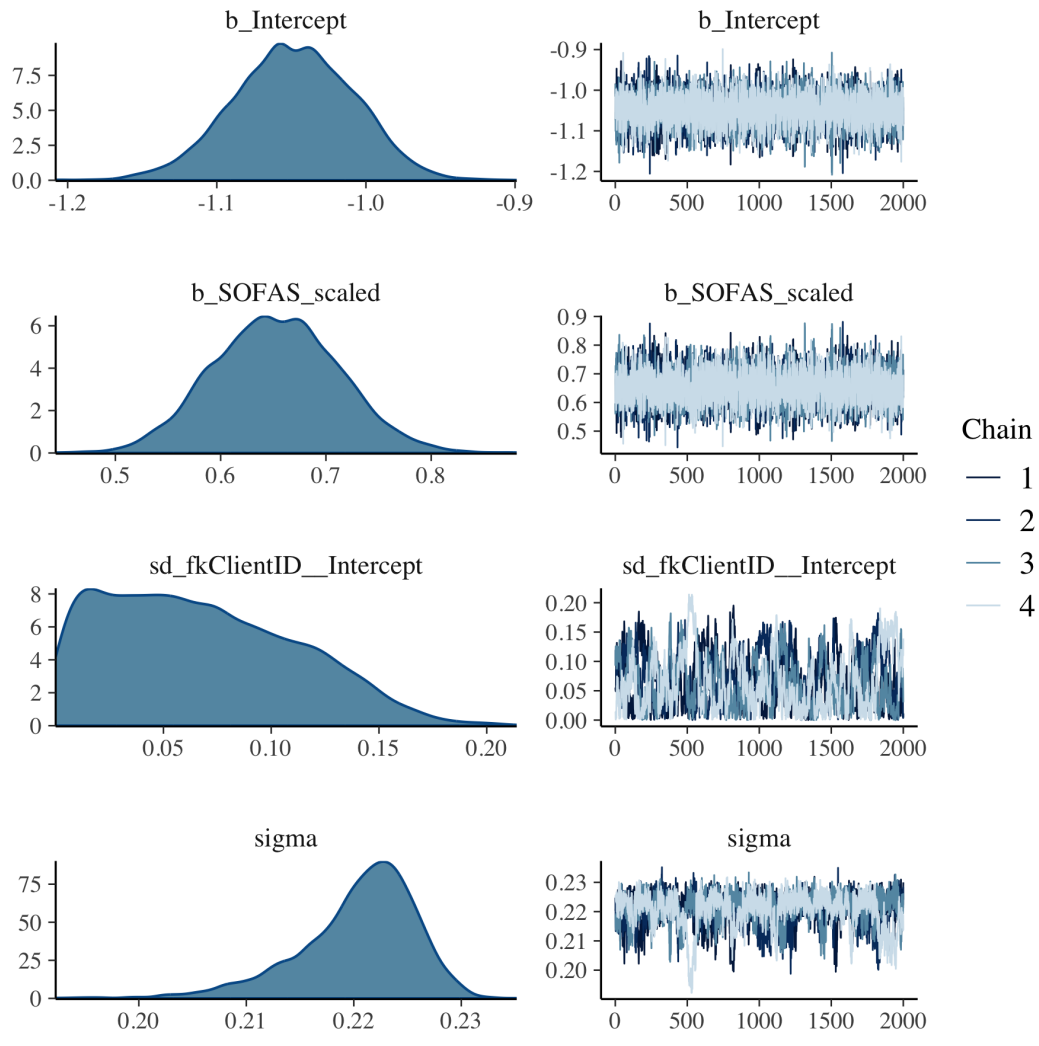


Figure 19: SOFAS generalised linear mixed model with Gaussian distribution and log link population and group level effects

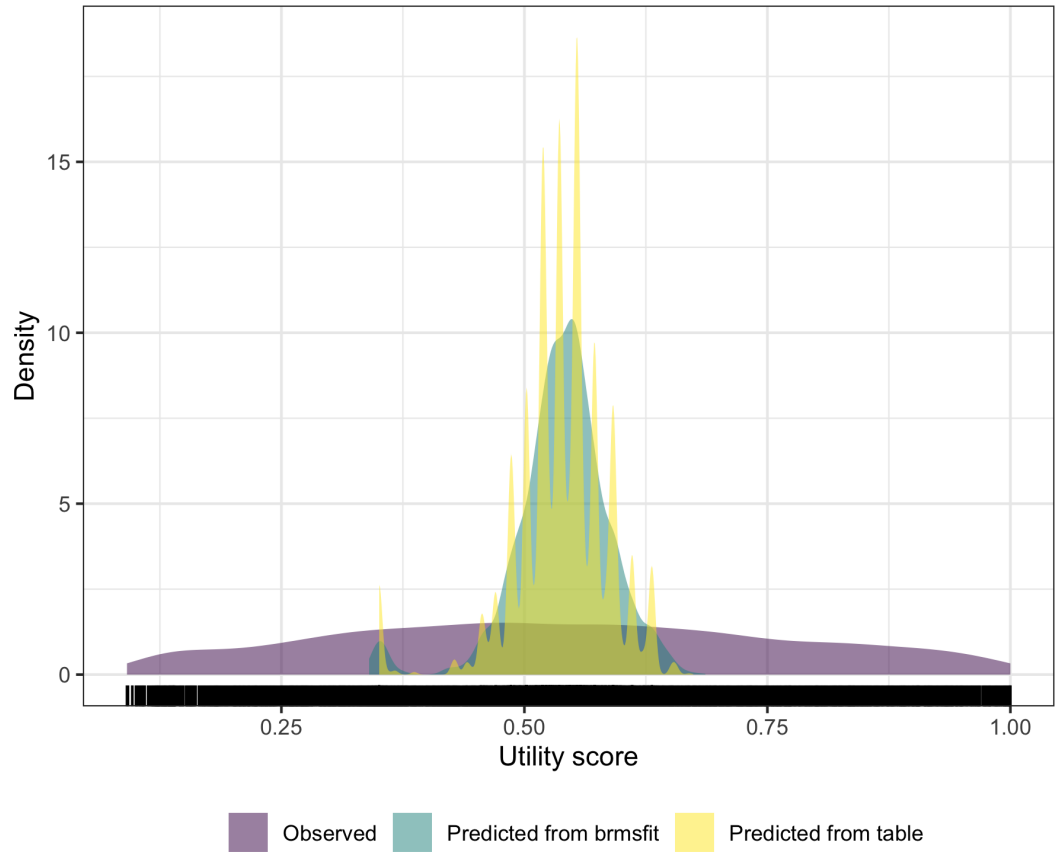


Figure 20: SOFAS generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

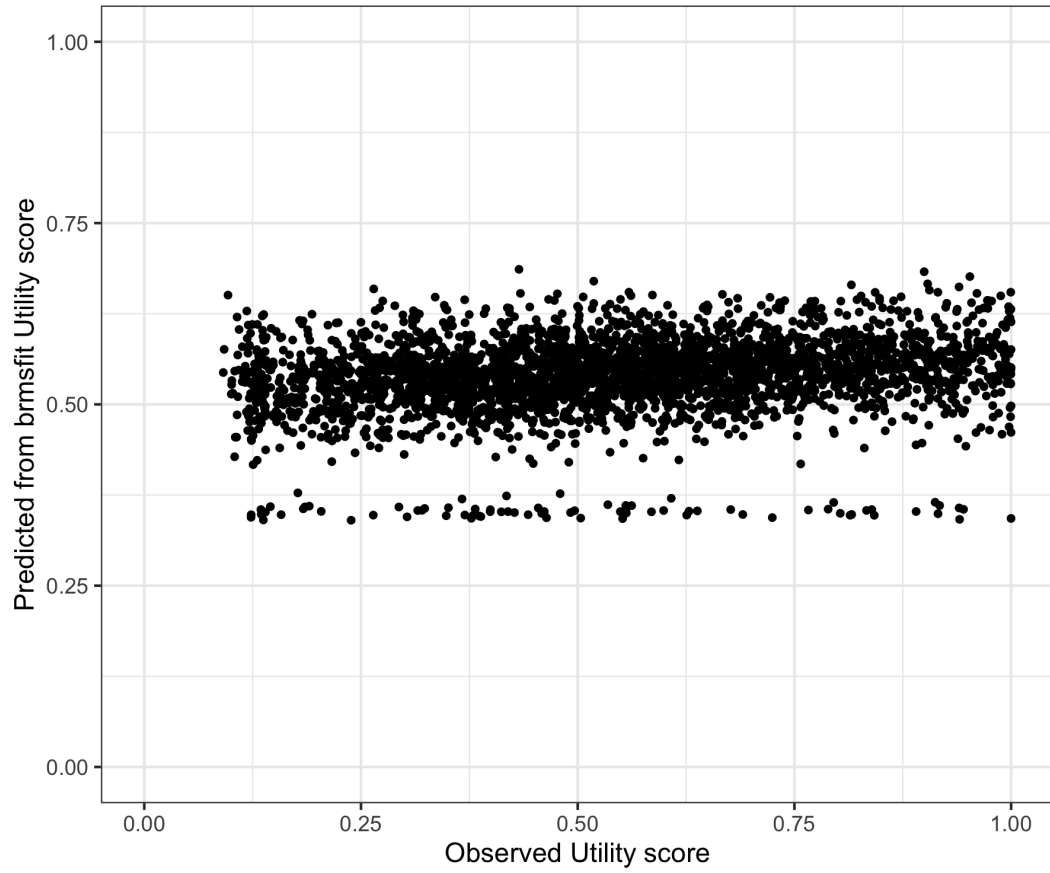


Figure 21: SOFAS generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

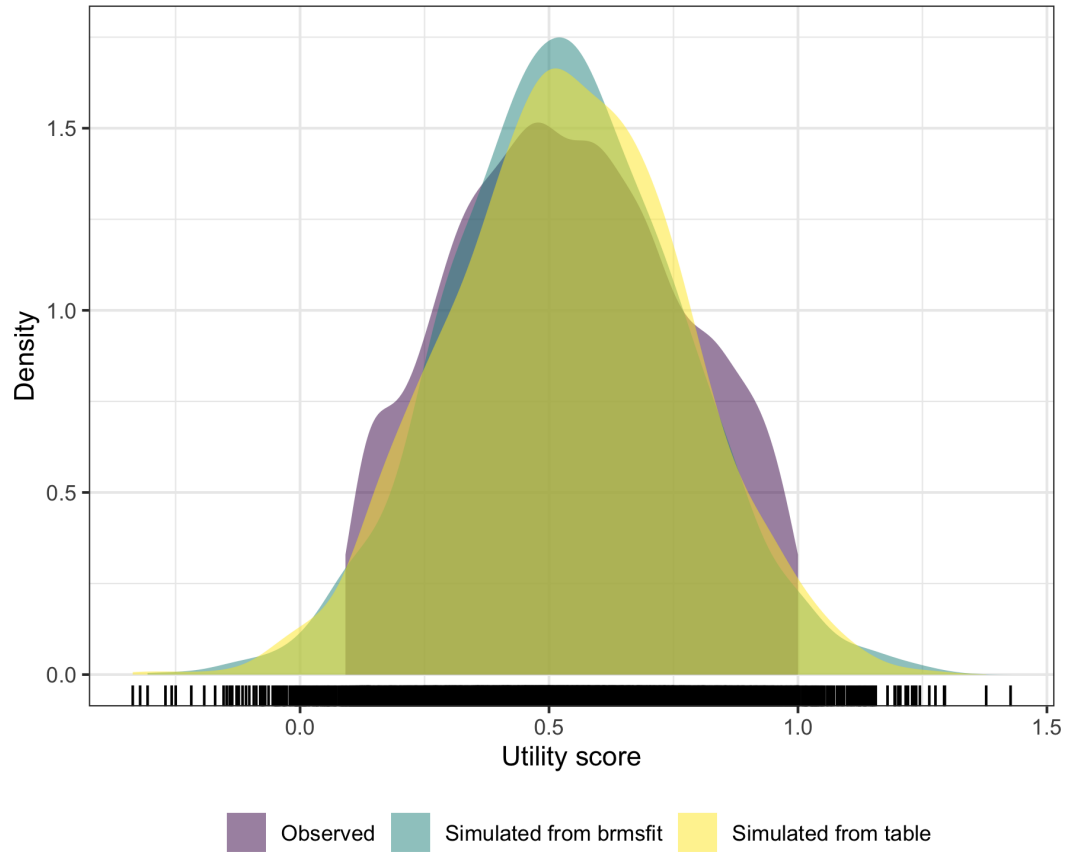


Figure 22: SOFAS generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

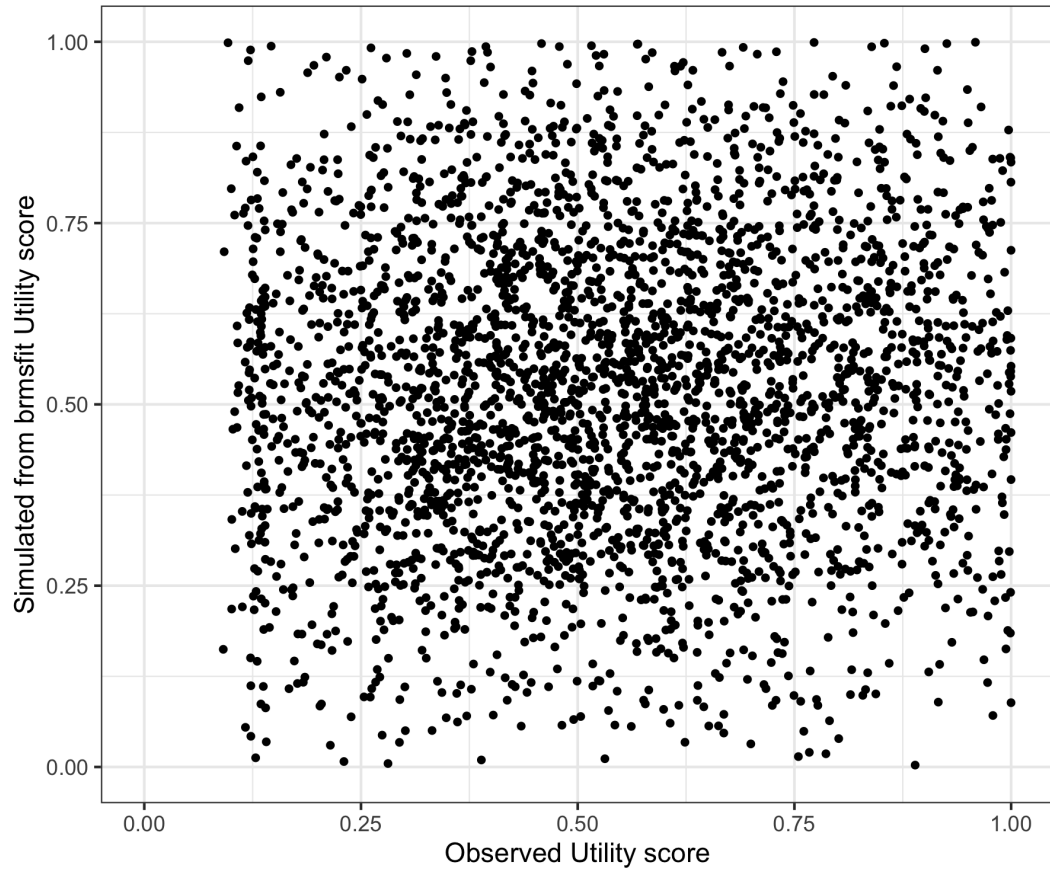


Figure 23: SOFAS generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

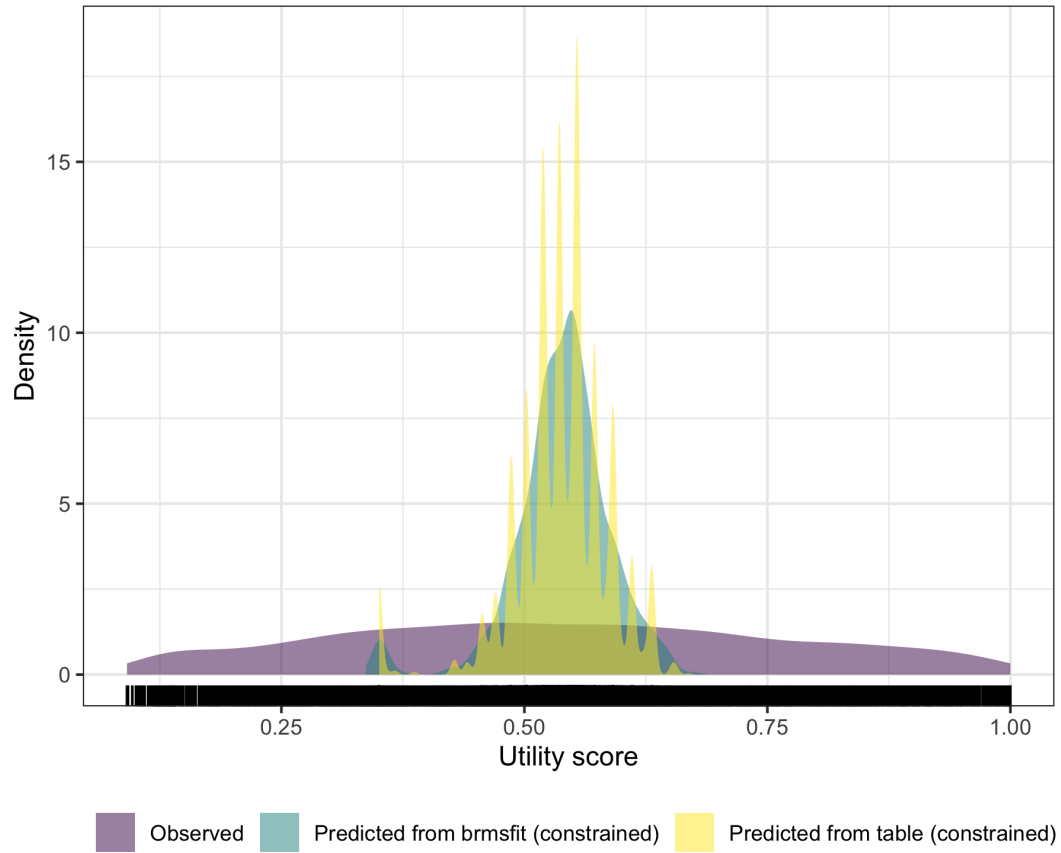


Figure 24: SOFAS generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

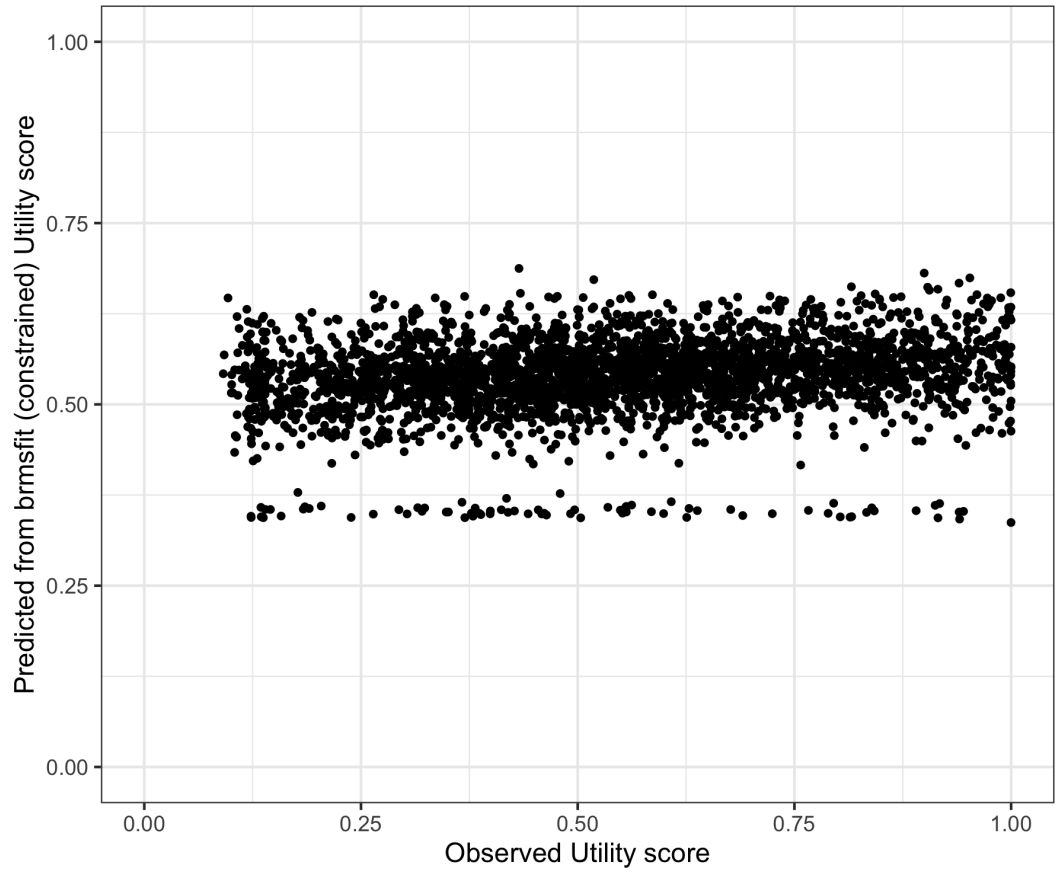


Figure 25: SOFAS generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

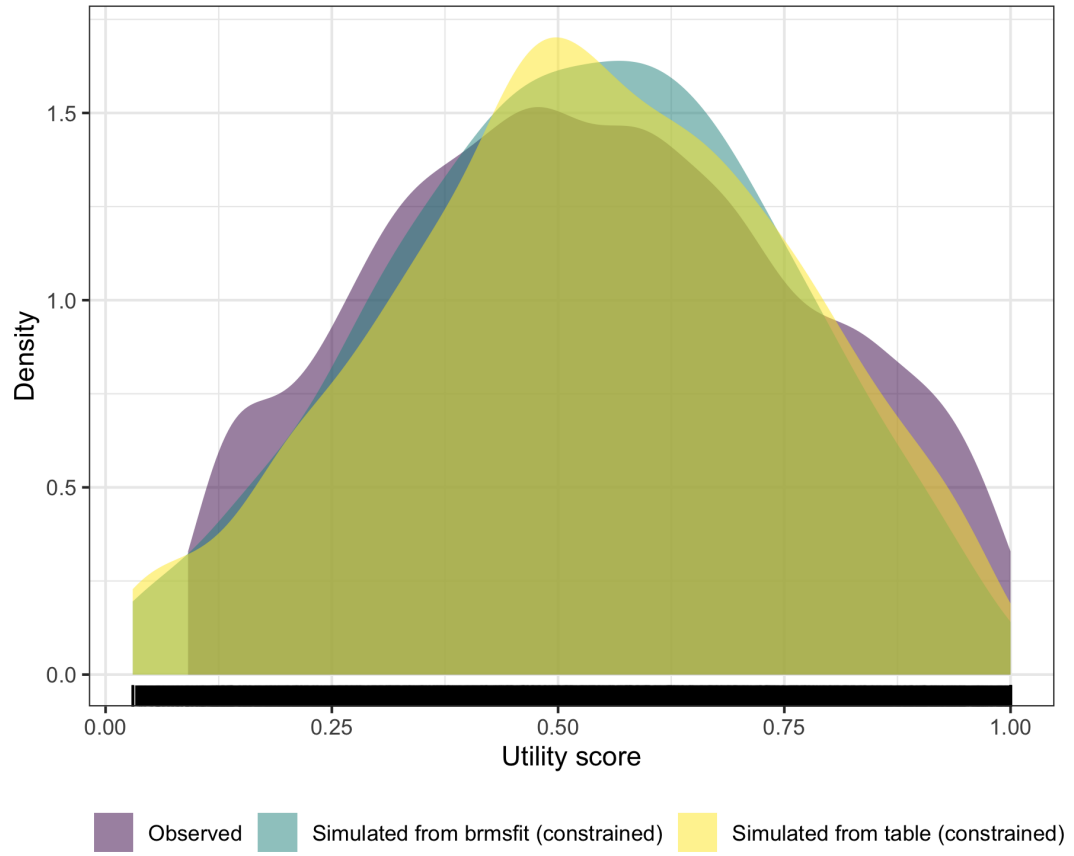


Figure 26: SOFAS generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

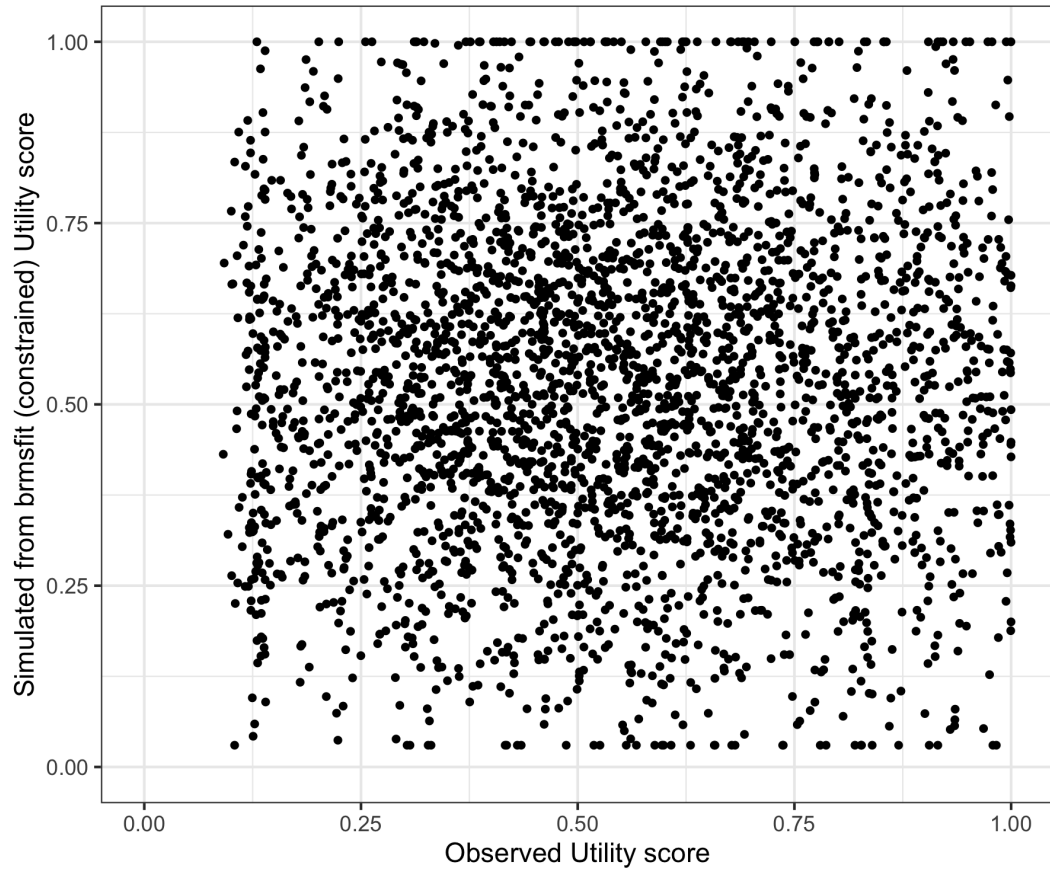


Figure 27: SOFAS generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

4 SOFAS linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)). The catalogue reference for this model is SOFAS_1_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 7: SOFAS linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3298)							
sd(Intercept)	0.44	0.22	0.04	0.74	1.88	6	12
Population-Level Effects:							
Intercept	-0.93	0.06	-1.05	-0.81	1.00	3 614	3 533
SOFAS_scaled	0.98	0.09	0.80	1.16	1.00	3 549	3 514
Family Specific Parameters:							
sigma	0.57	0.18	0.23	0.78	1.89	6	12

Formula: AQOL6D_CLL ~SOFAS_scaled + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 8: SOFAS linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.43	0.30	0.038 , 0.911
RMSE	1.10	0.05	1.053 , 1.15

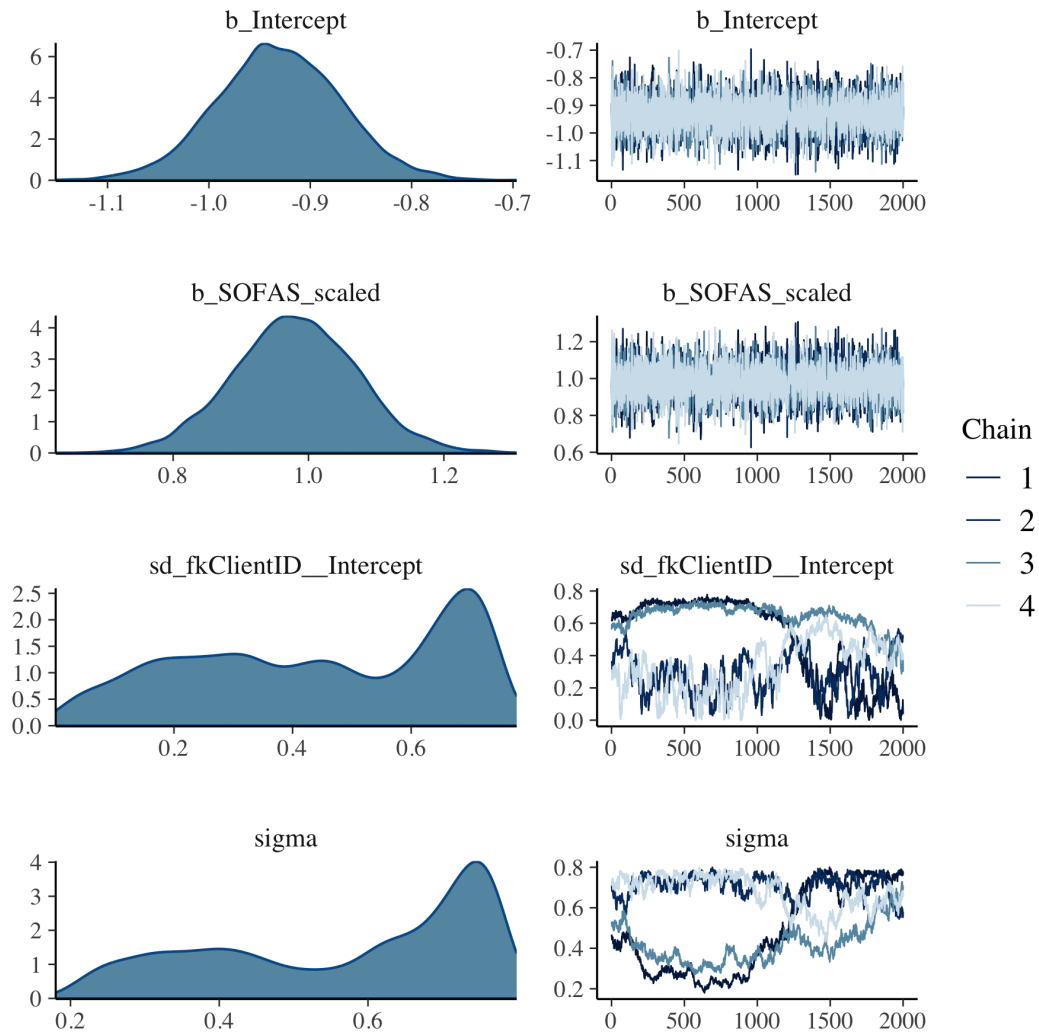


Figure 28: SOFAS linear mixed model with complementary log log transformation population and group level effects

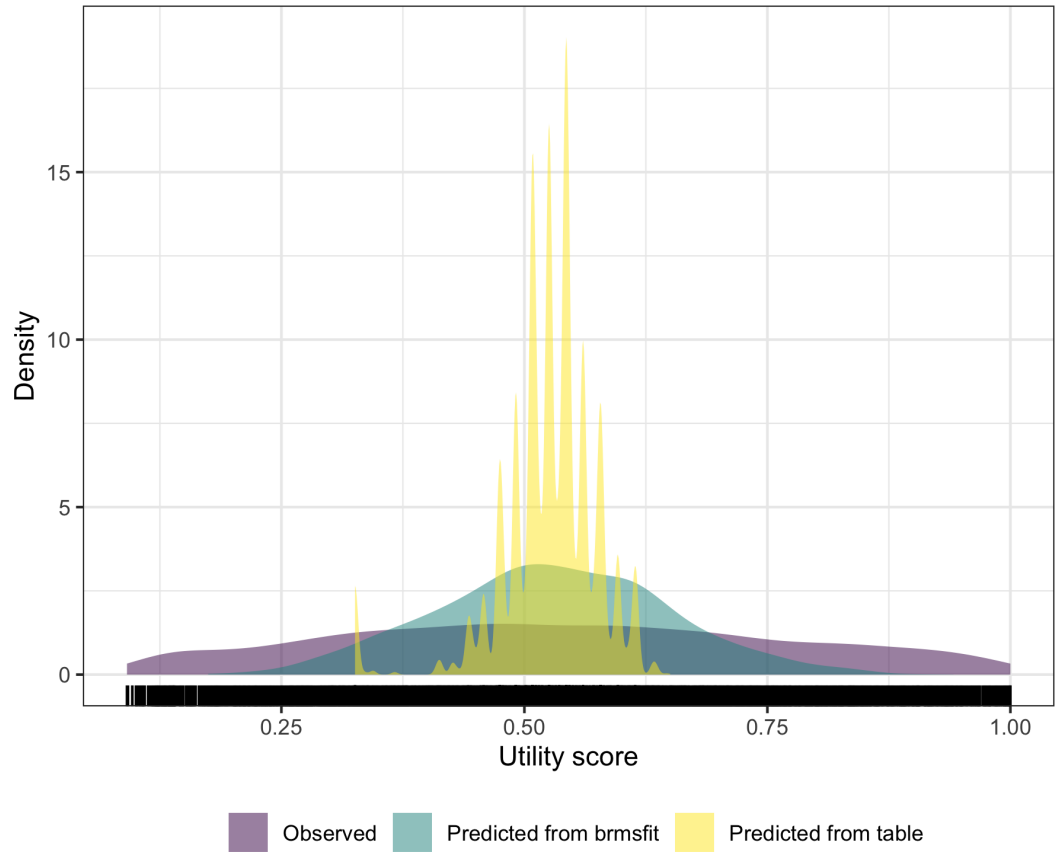


Figure 29: SOFAS linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

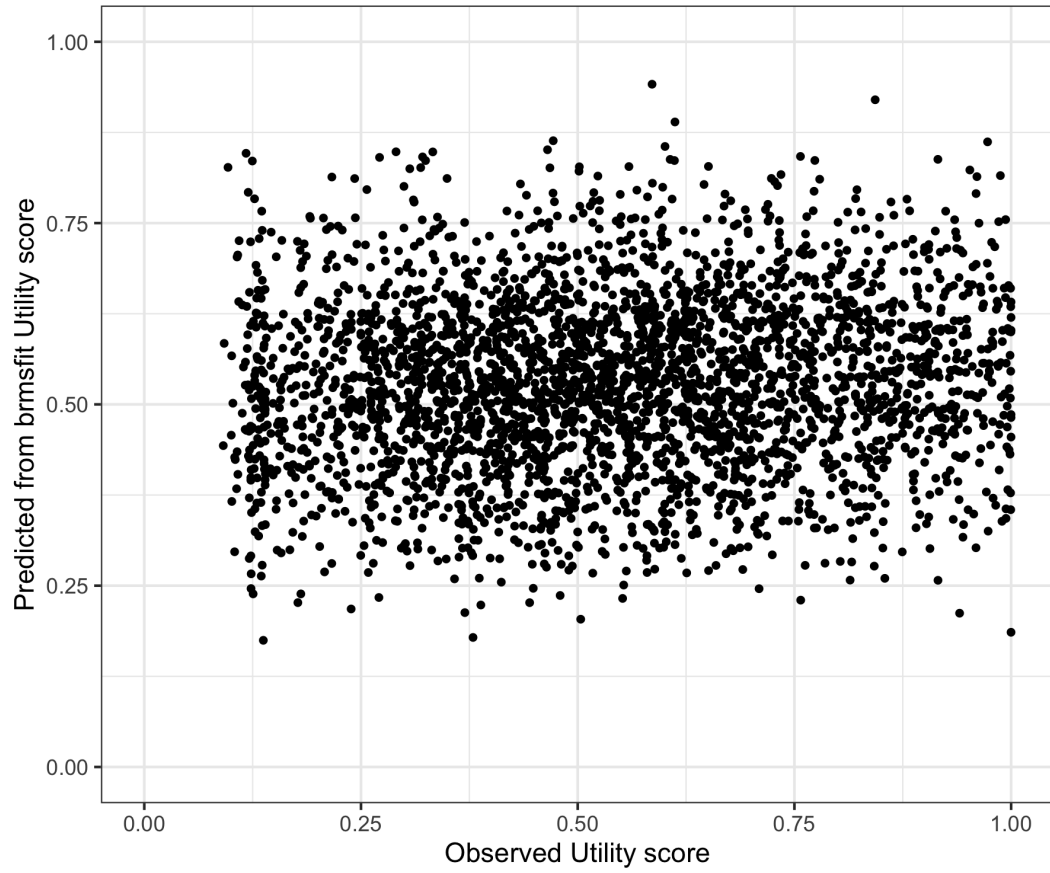


Figure 30: SOFAS linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

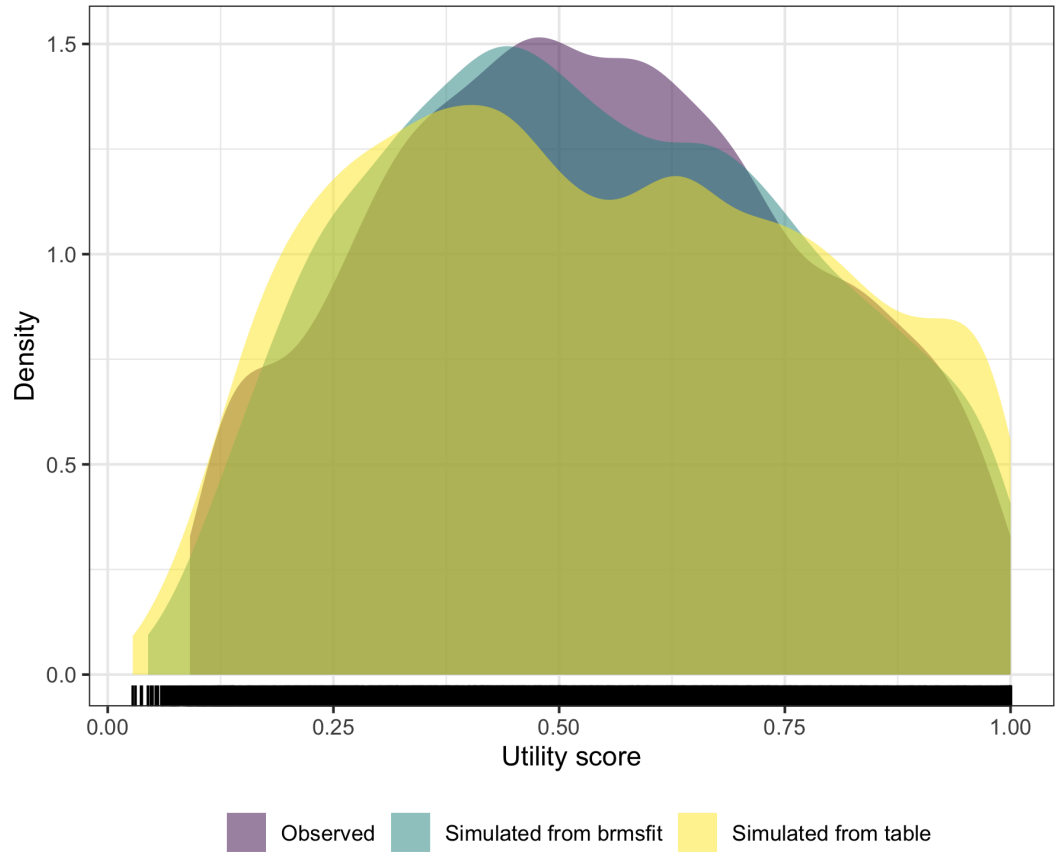


Figure 31: SOFAS linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

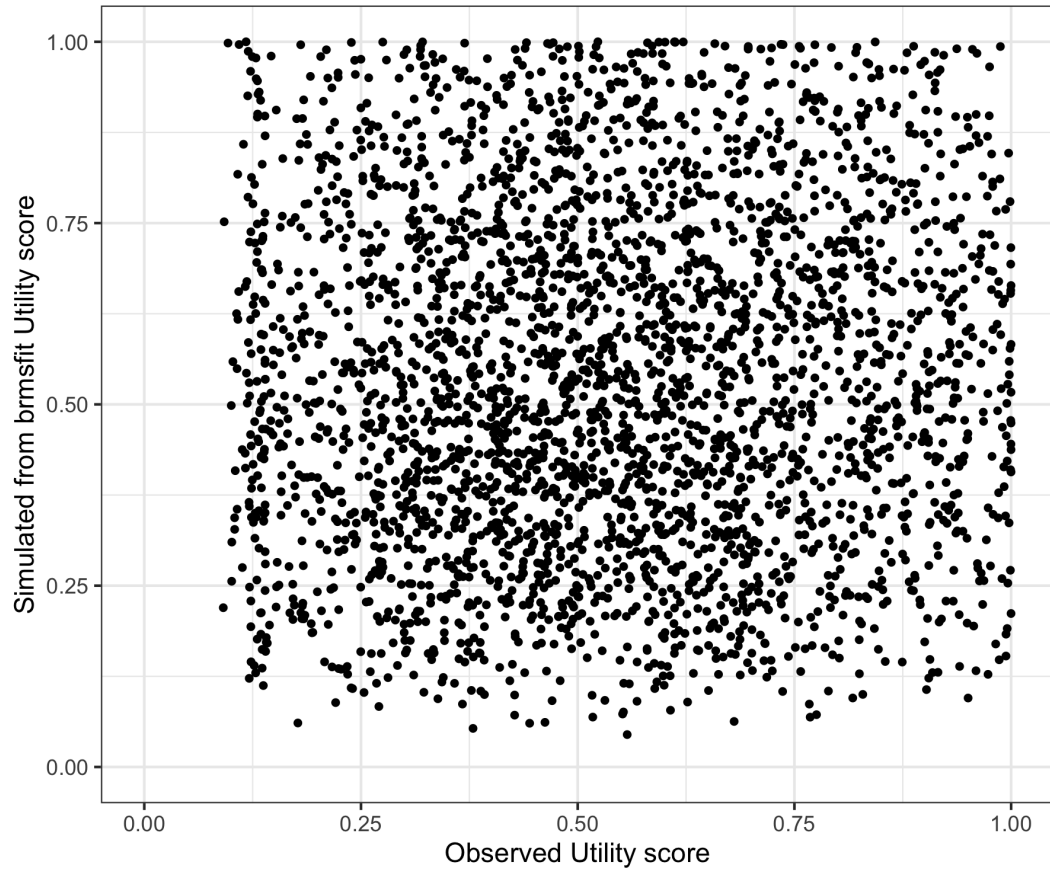


Figure 32: SOFAS linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

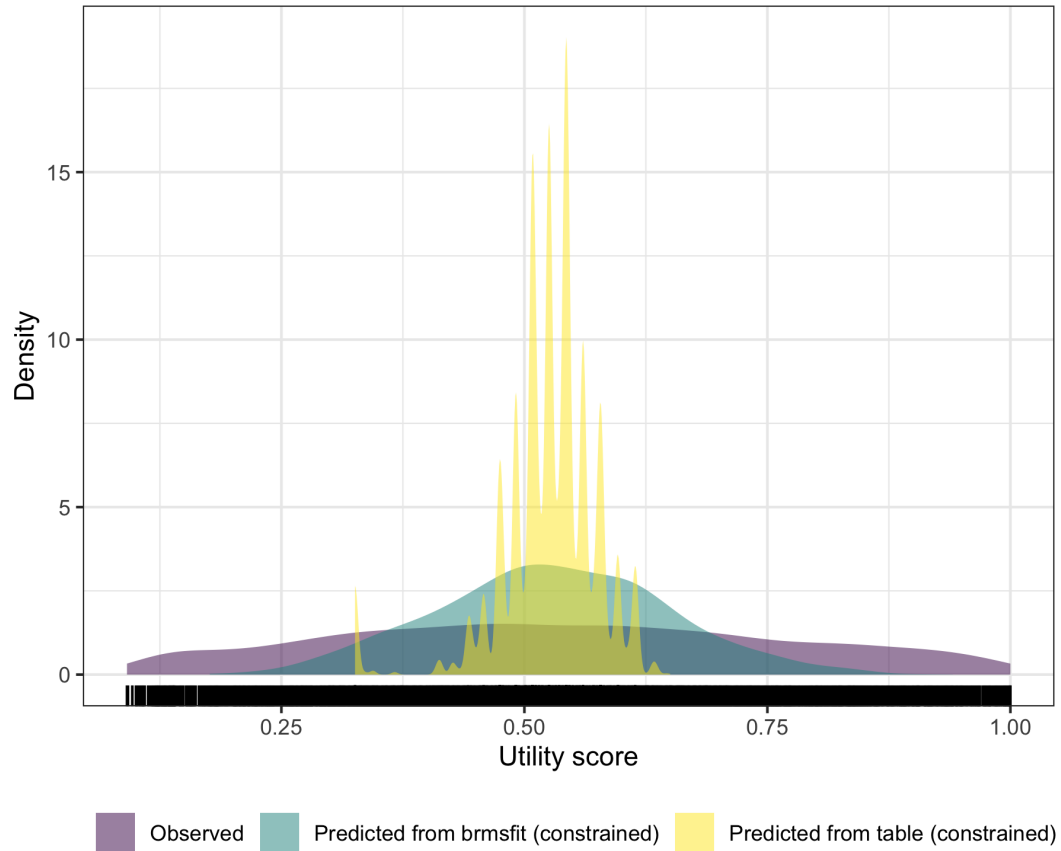


Figure 33: SOFAS linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

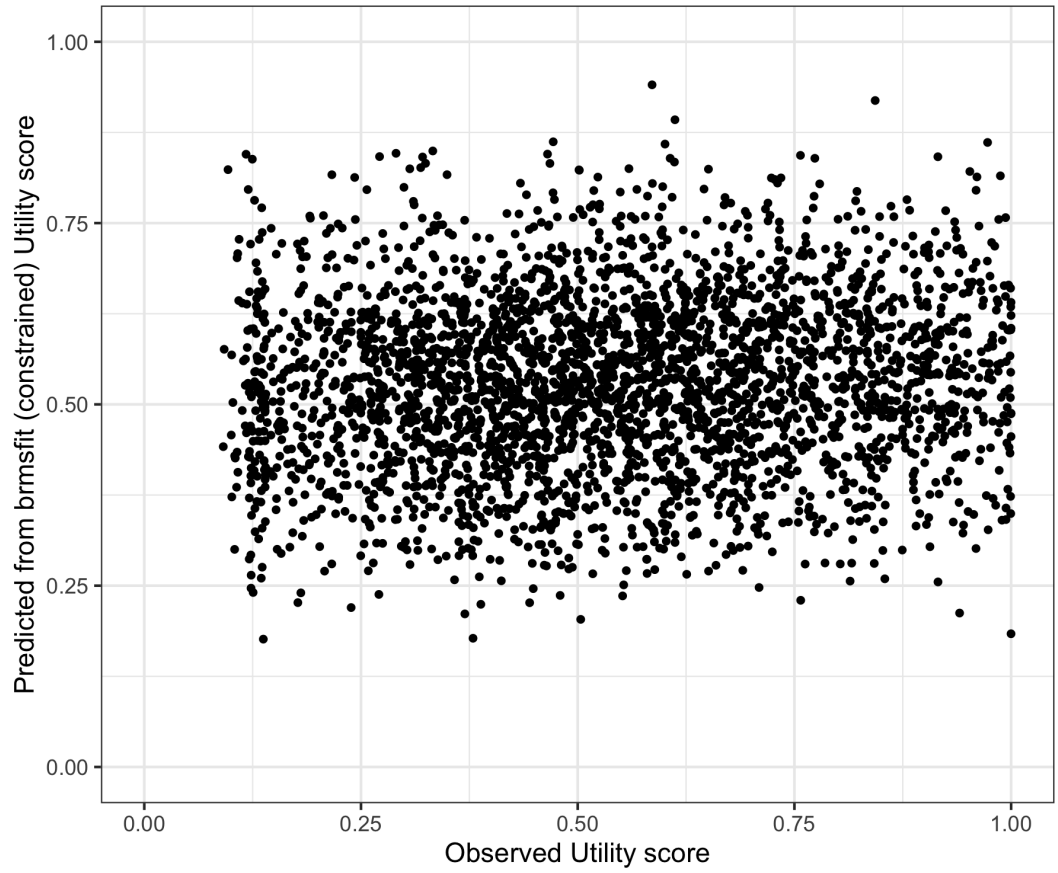


Figure 34: SOFAS linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

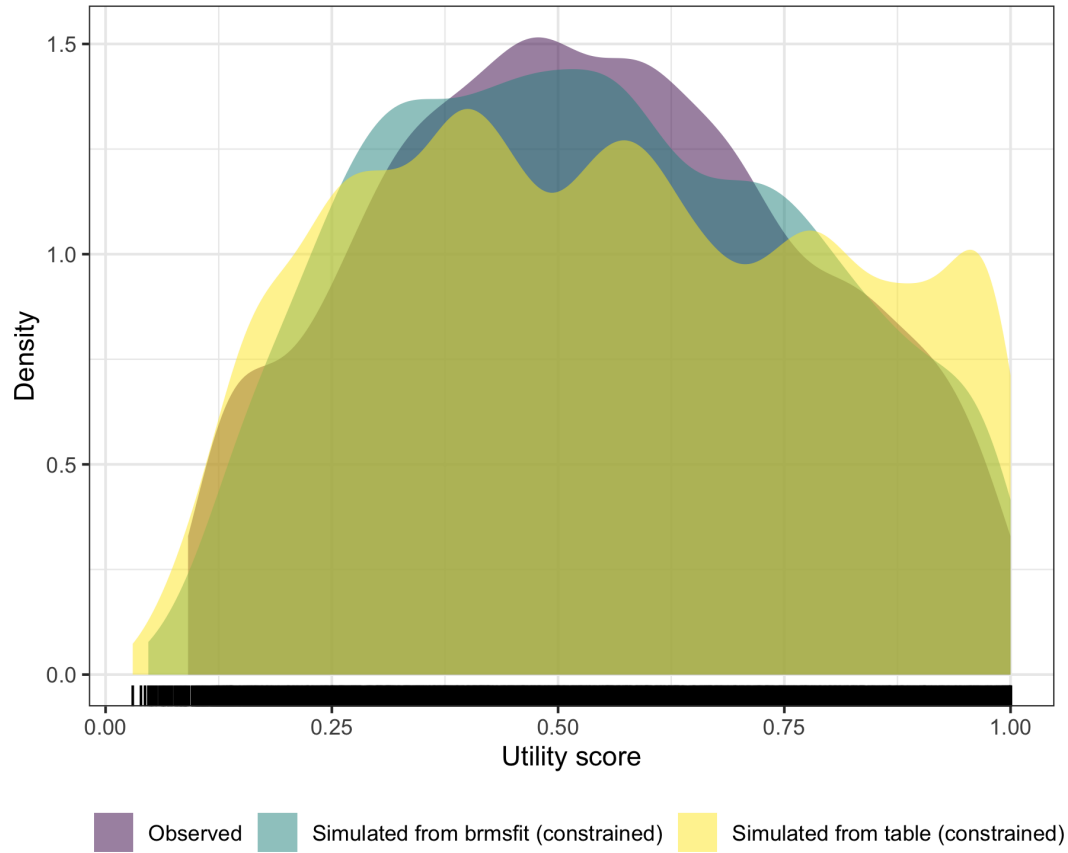


Figure 35: SOFAS linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

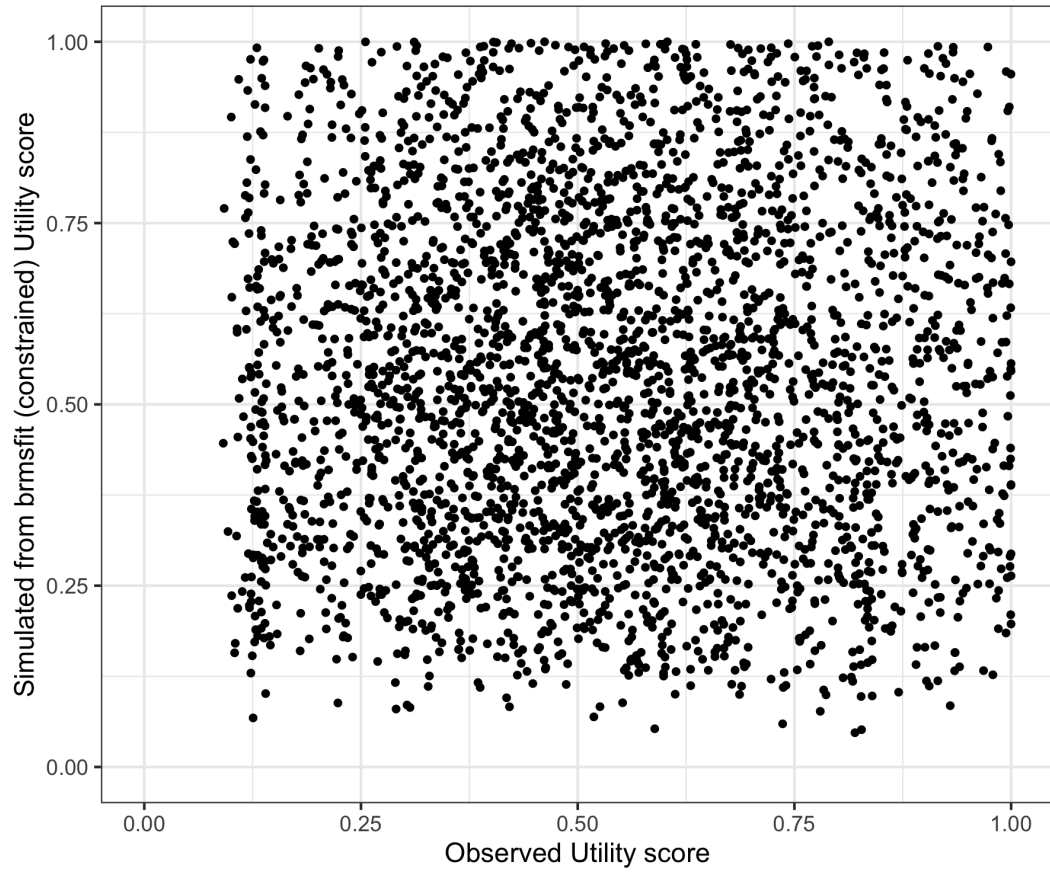


Figure 36: SOFAS linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

5 K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); and - cdaysoor (days out of role). The catalogue reference for this model is K10_cdaysoor_1_GLM_GSN_LOG.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 9: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3992)							
sd(Intercept)	0.32	0.52	0.00	1.50	2.07	5	11
Population-Level Effects:							
Intercept	0.11	0.26	-0.38	0.30	1.79	6	19
K10_scaled	-2.53	0.73	-3.13	-1.38	1.74	6	41
cdaysoor	-0.00	0.00	-0.01	0.00	1.75	6	12
Family Specific Parameters:							
sigma	1.05	1.55	0.17	4.57	1.82	6	11

Formula: AQOL6D ~K10_scaled + cdaysoor + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 10: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.45	0.04	0.318 , 0.499
RMSE	1.20	1.71	0.239 , 1.031

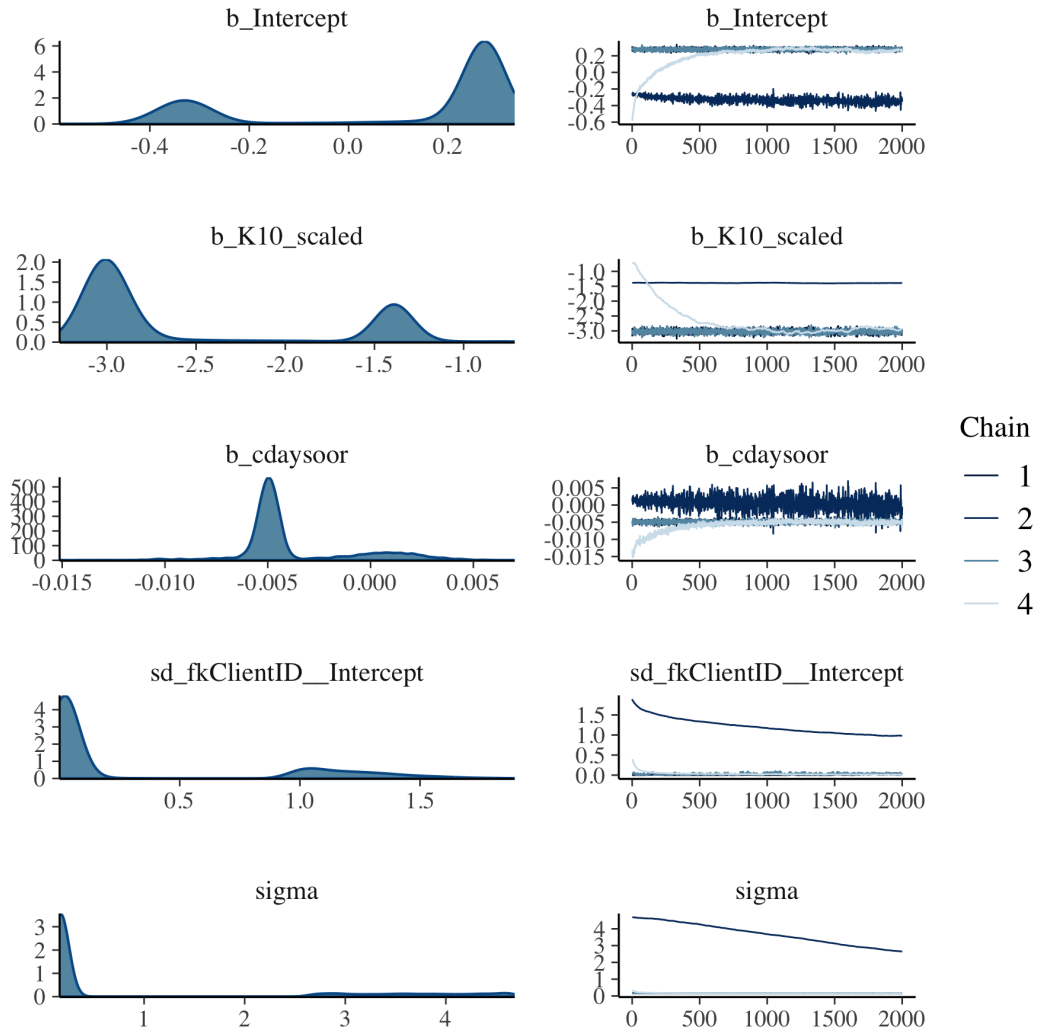


Figure 37: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link population and group level effects

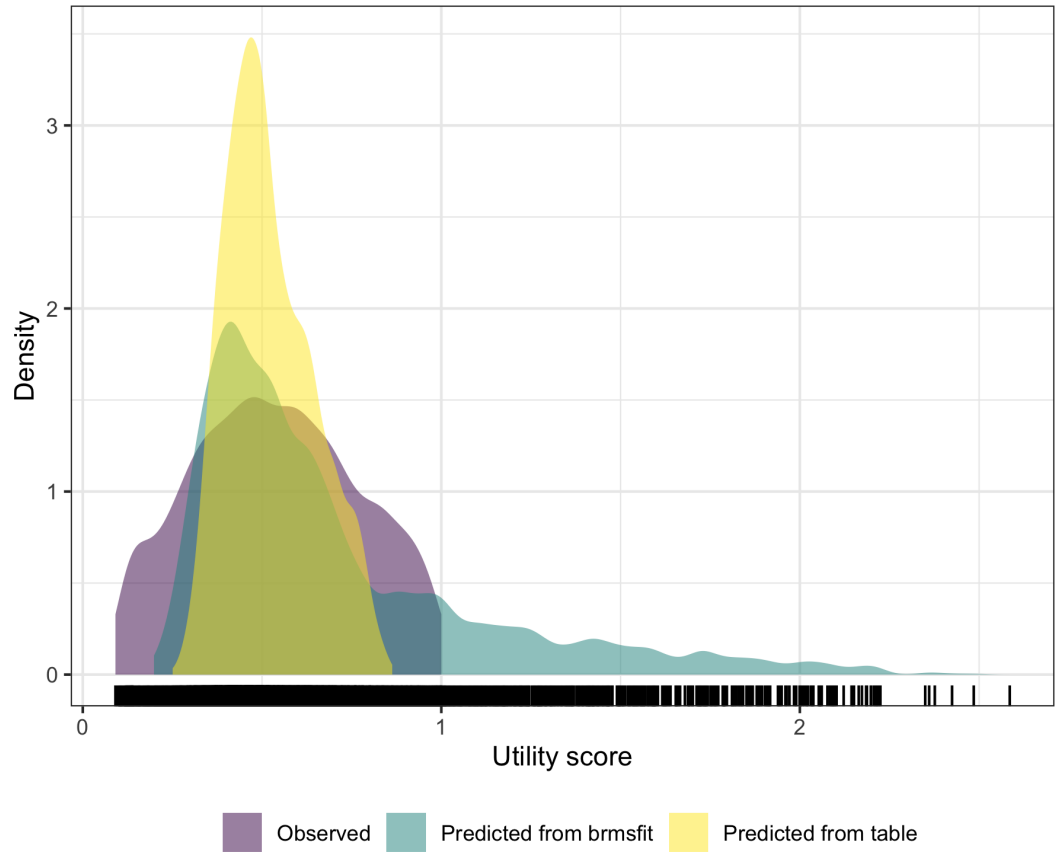


Figure 38: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

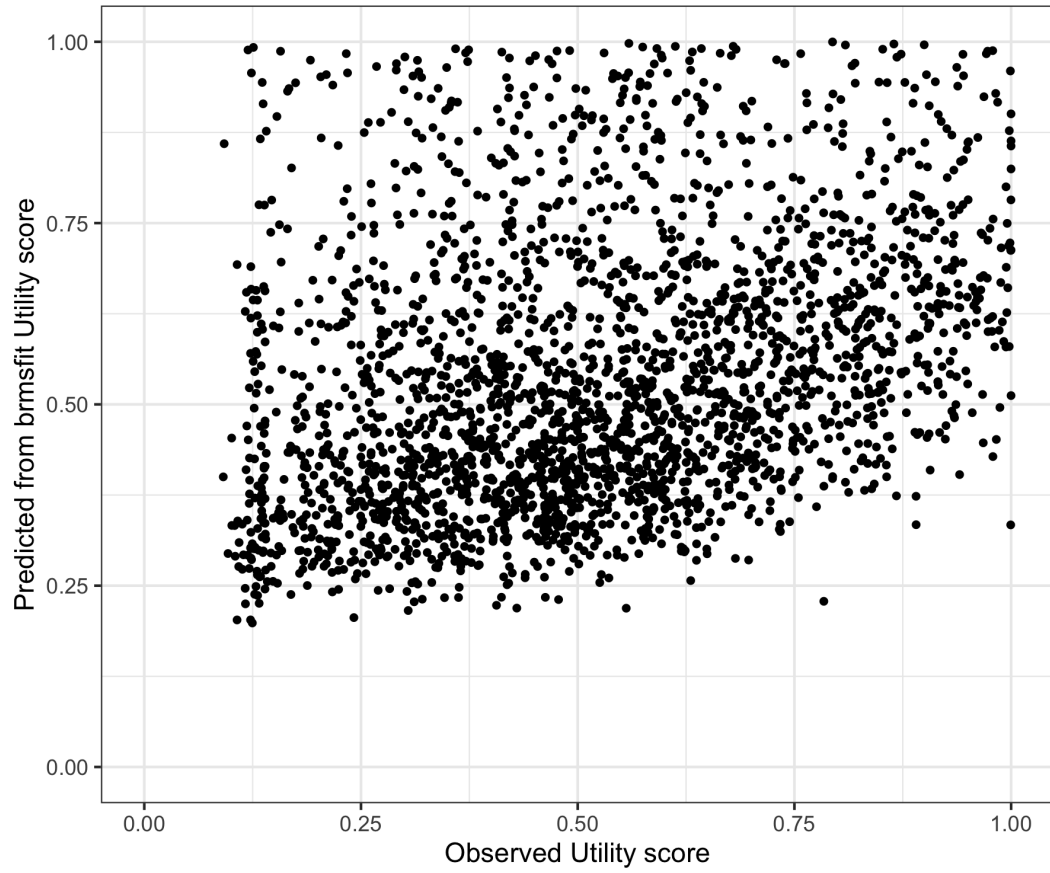


Figure 39: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

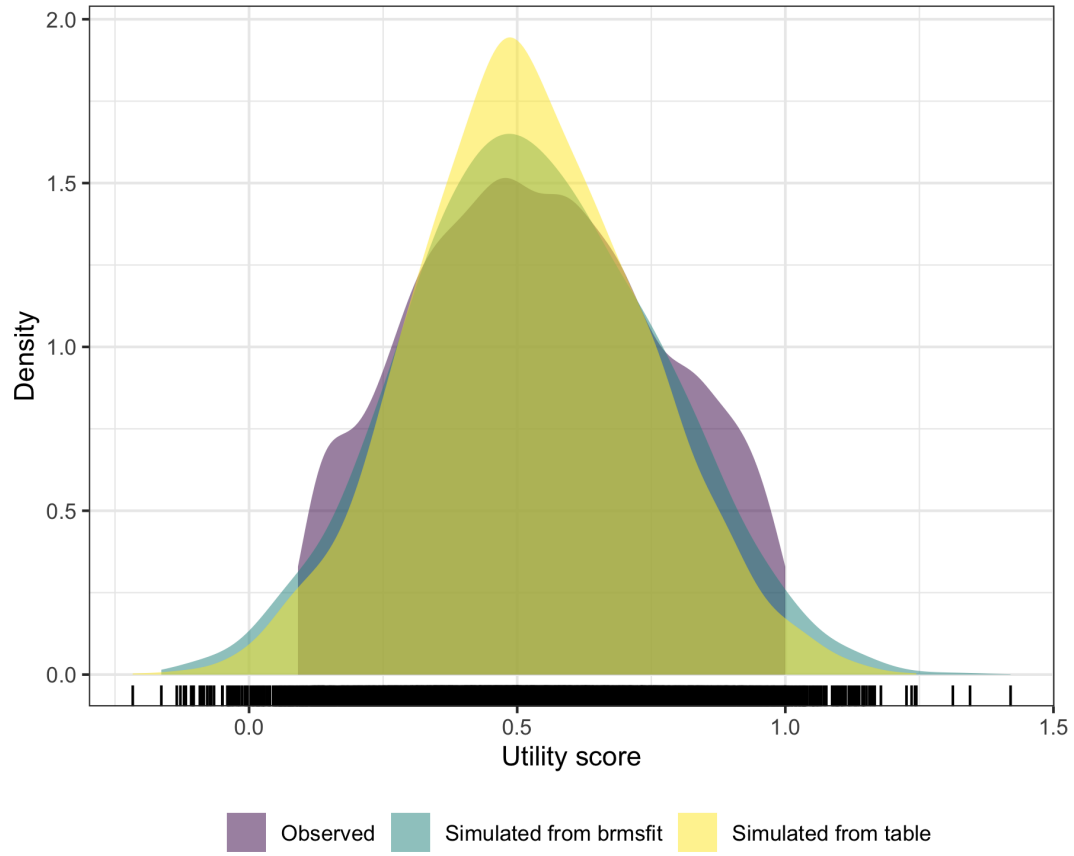


Figure 40: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

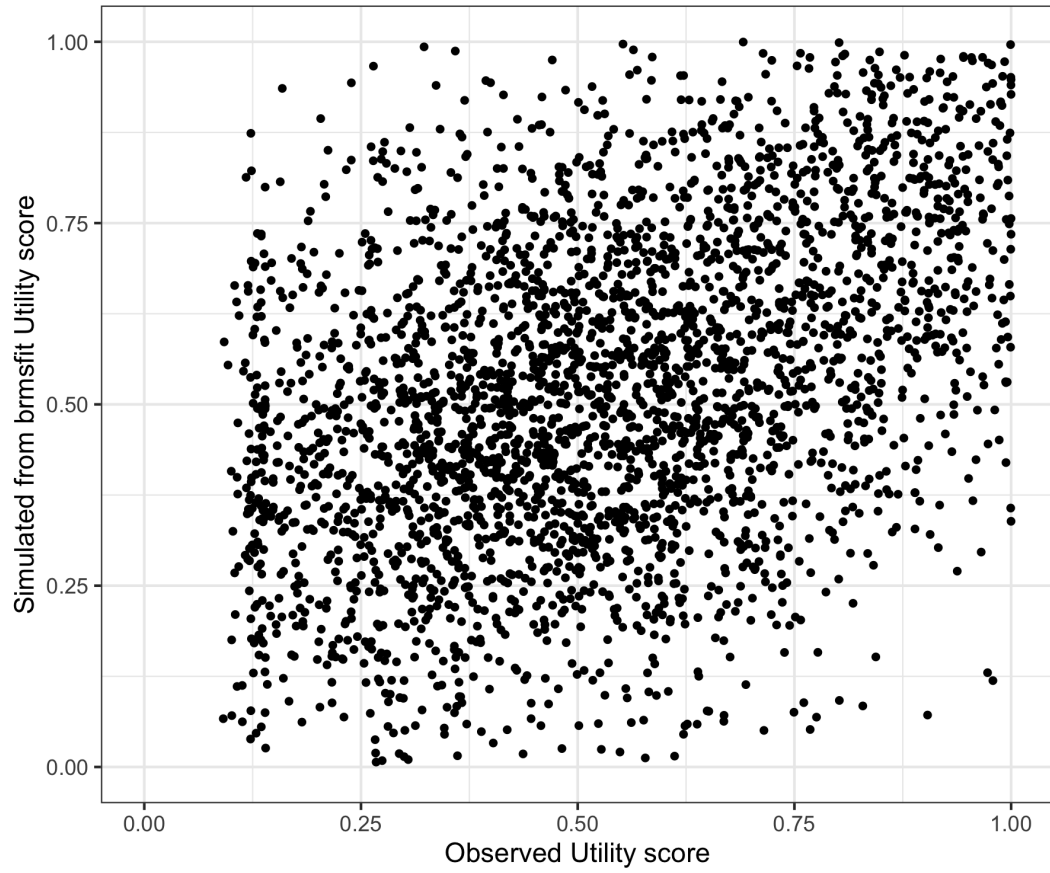


Figure 41: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

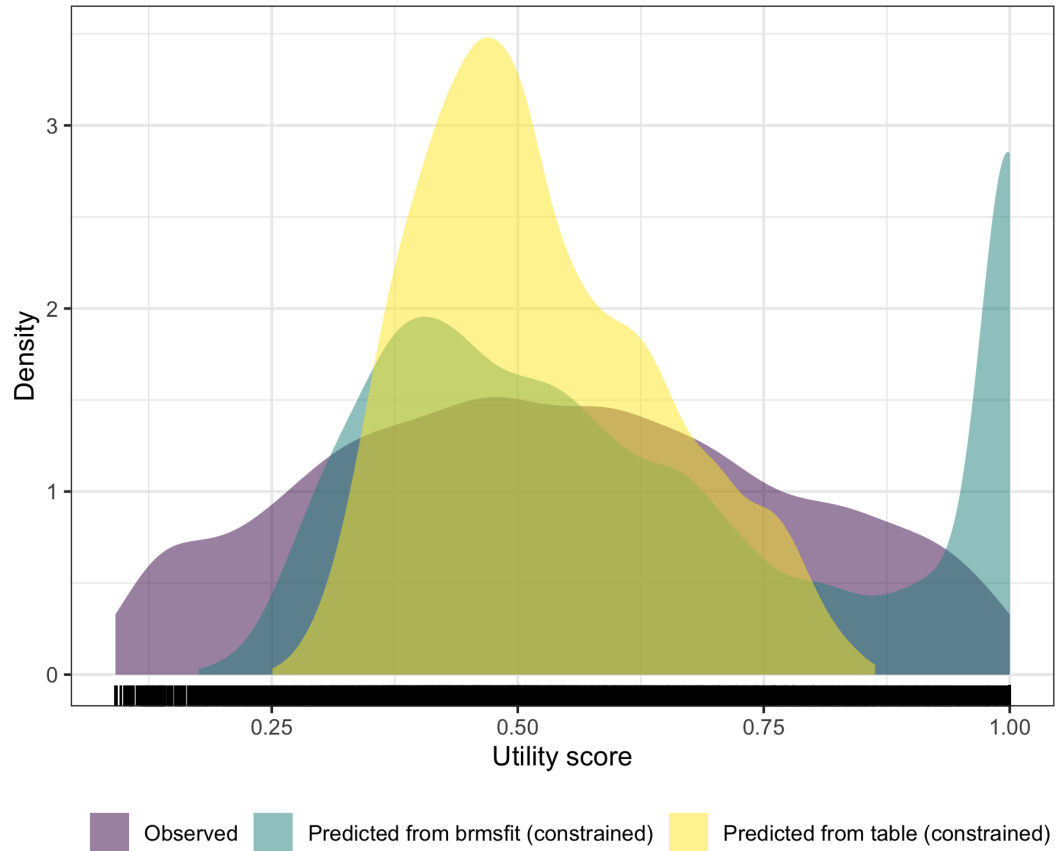


Figure 42: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

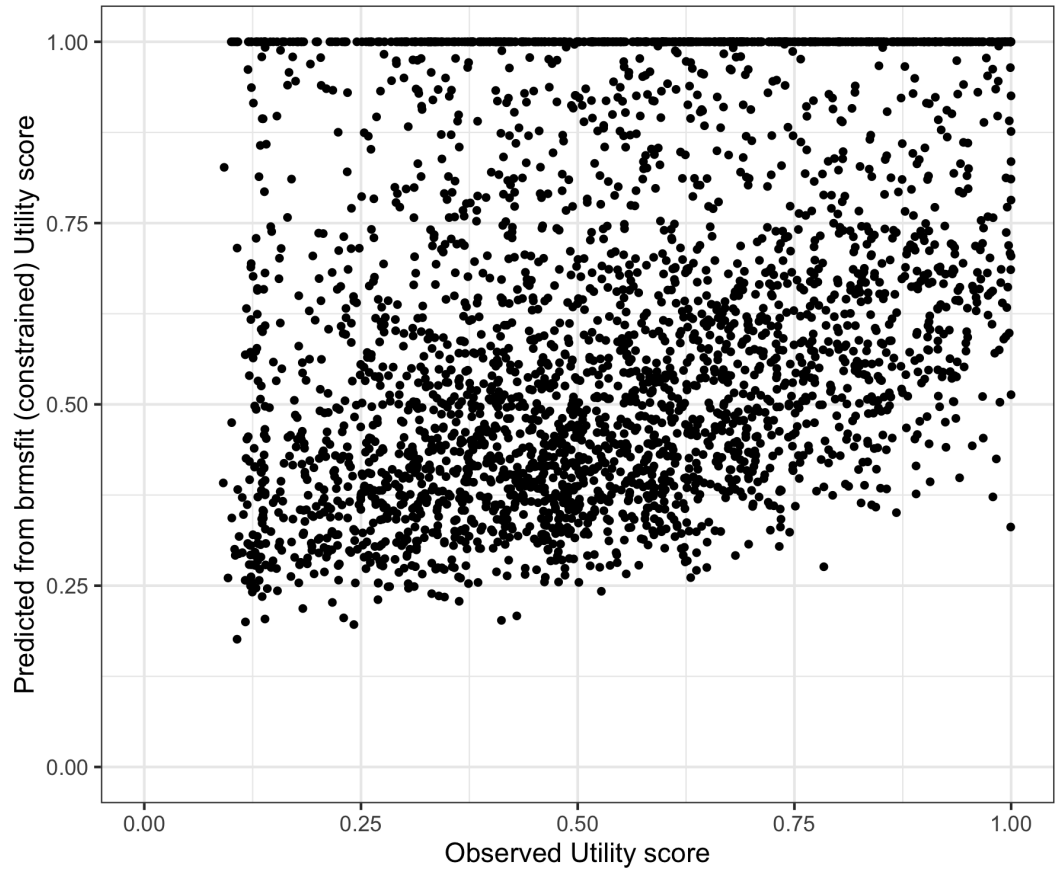


Figure 43: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

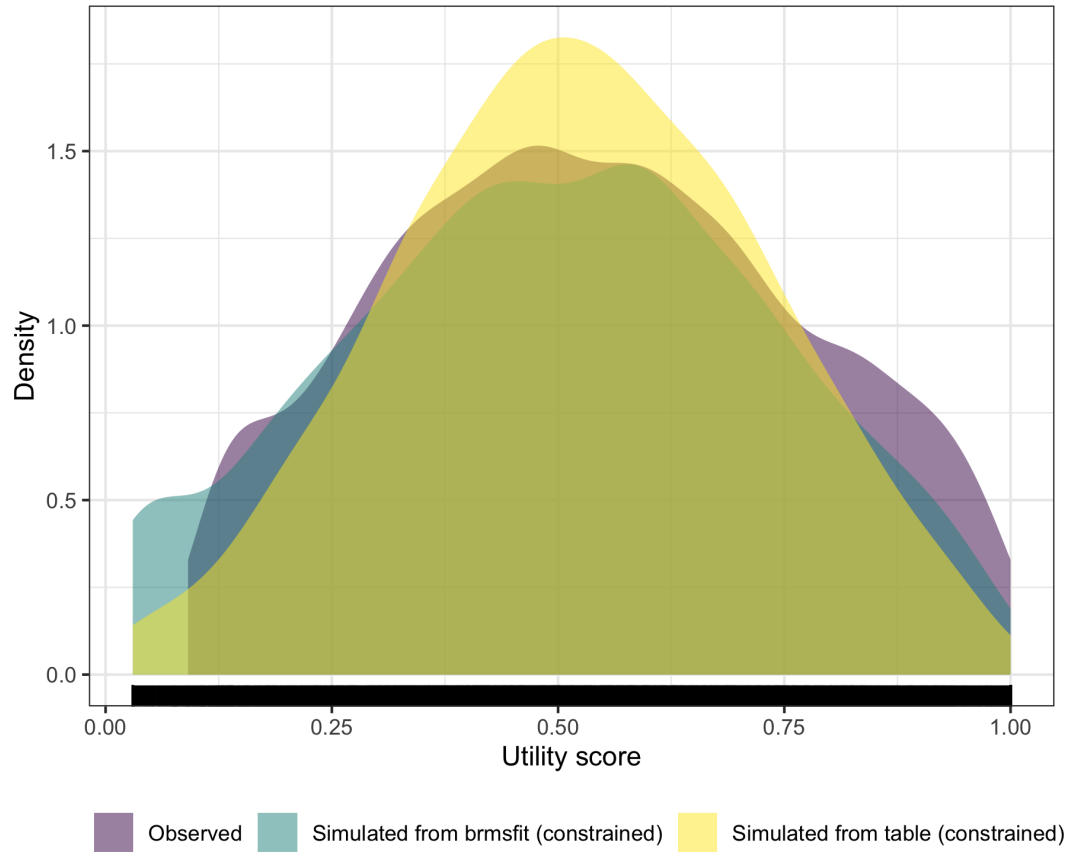


Figure 44: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

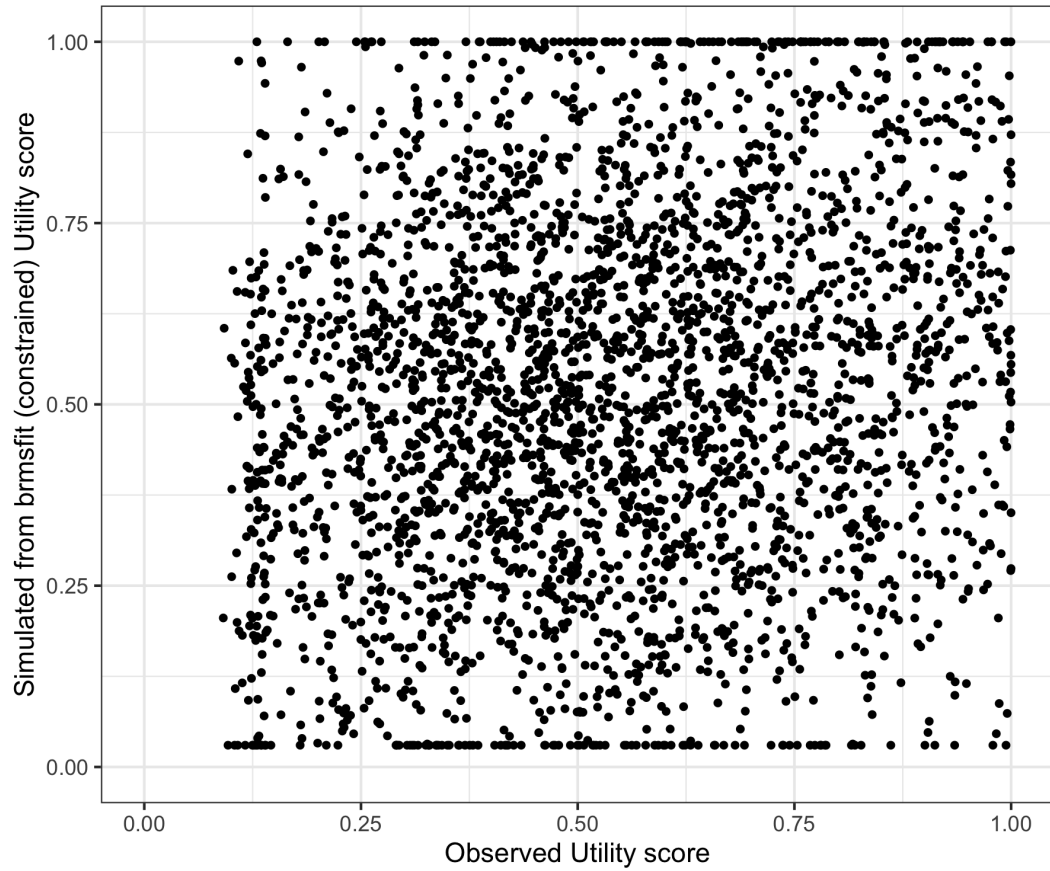


Figure 45: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

6 K10 with cdaysoor linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); and - cdaysoor (days out of role). The catalogue reference for this model is K10_cdaysoor_1_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 51 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>

Table 11: K10 with cdaysoor linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3992)							
sd(Intercept)	0.31	0.16	0.02	0.54	1.47	8	27
Population-Level Effects:							
Intercept	1.44	0.03	1.37	1.50	1.00	5 157	4 160
K10_scaled	-5.62	0.12	-5.85	-5.38	1.00	4 822	5 085
cdaysoor	-0.01	0.00	-0.01	-0.01	1.00	4 743	5 283
Family Specific Parameters:							
sigma	0.47	0.11	0.24	0.60	1.46	8	32

Formula: AQOL6D_CLL ~K10_scaled + cdaysoor + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 12: K10 with cdaysoor linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.62	0.15	0.433 , 0.904
RMSE	1.08	0.03	1.056 , 1.1

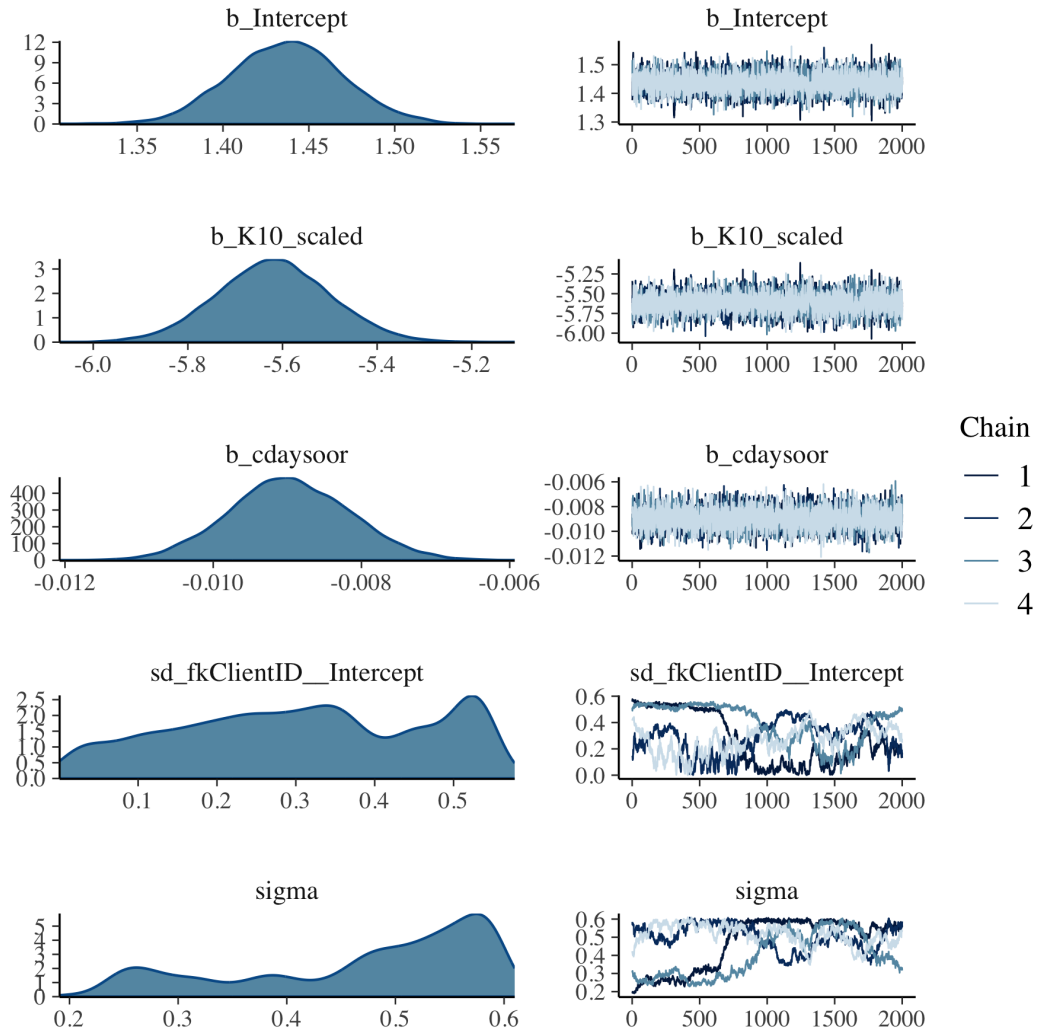


Figure 46: K10 with cdaysoor linear mixed model with complementary log log transformation population and group level effects

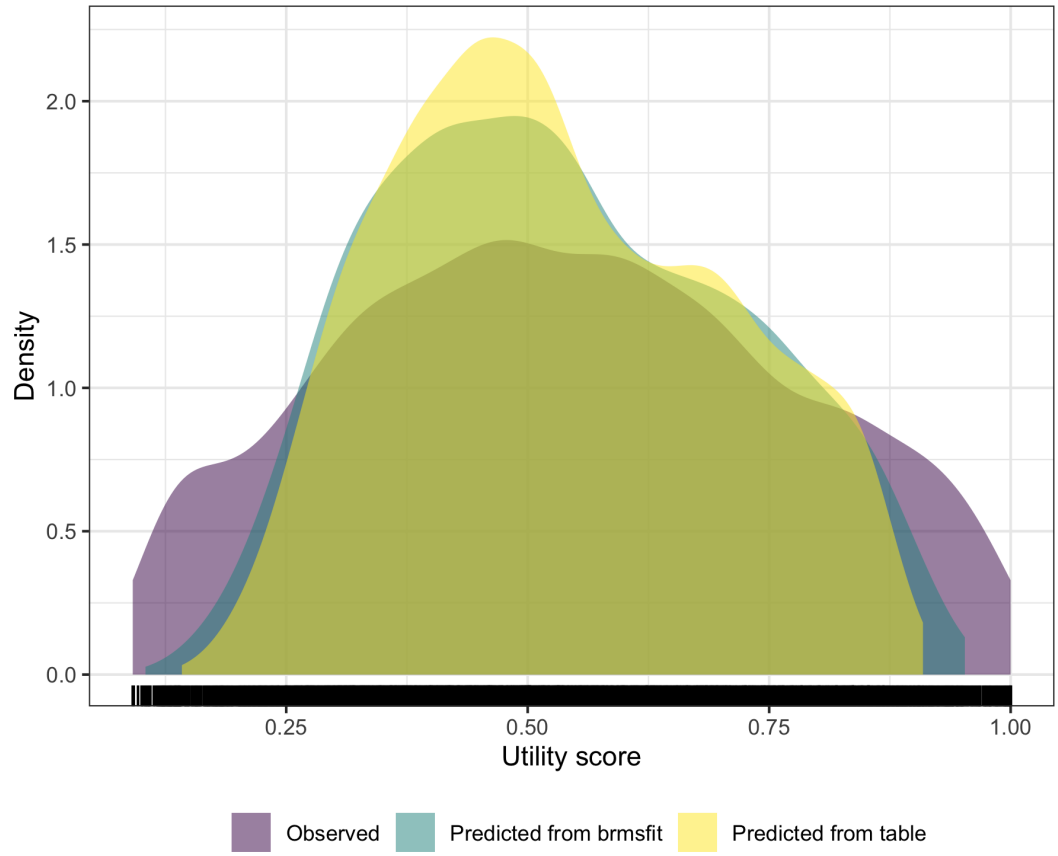


Figure 47: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

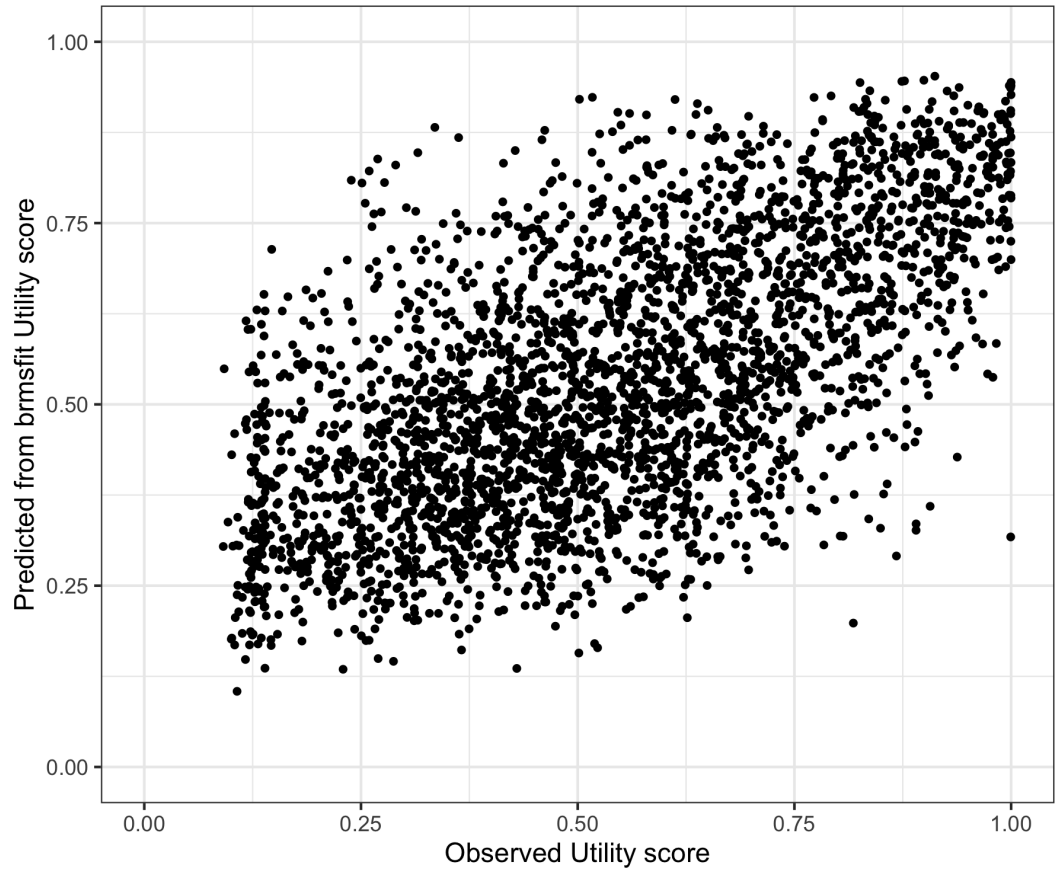


Figure 48: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

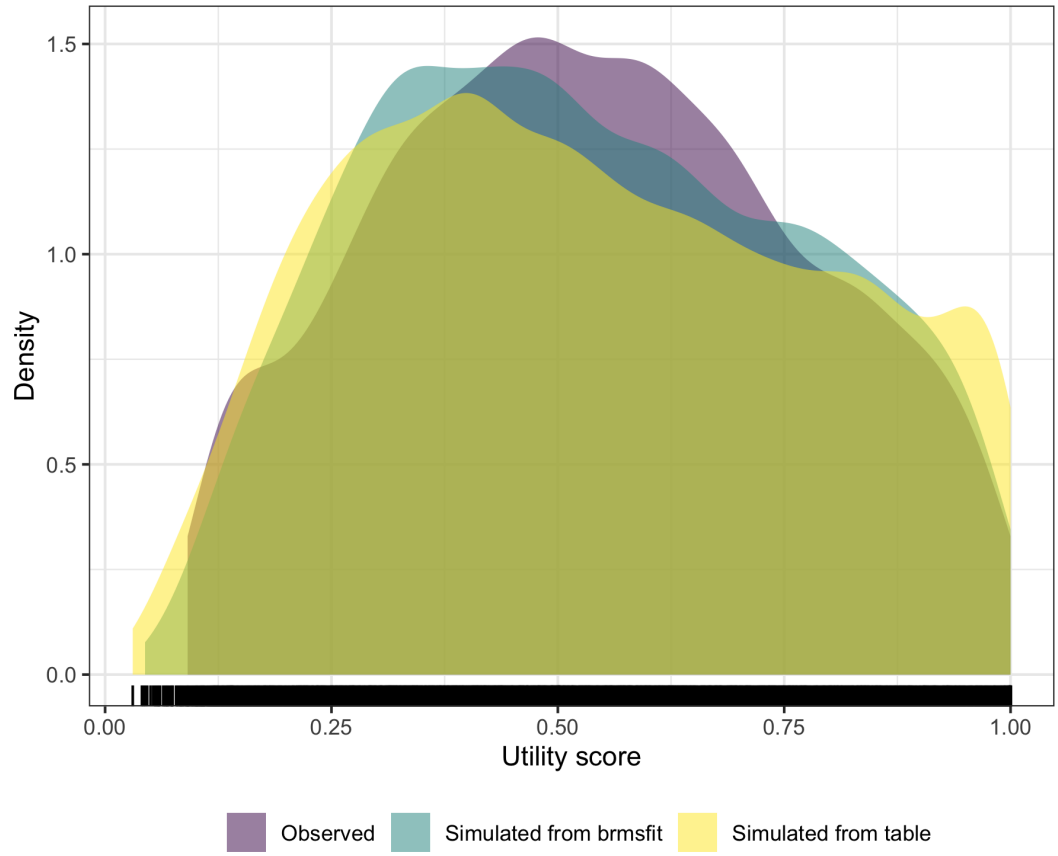


Figure 49: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

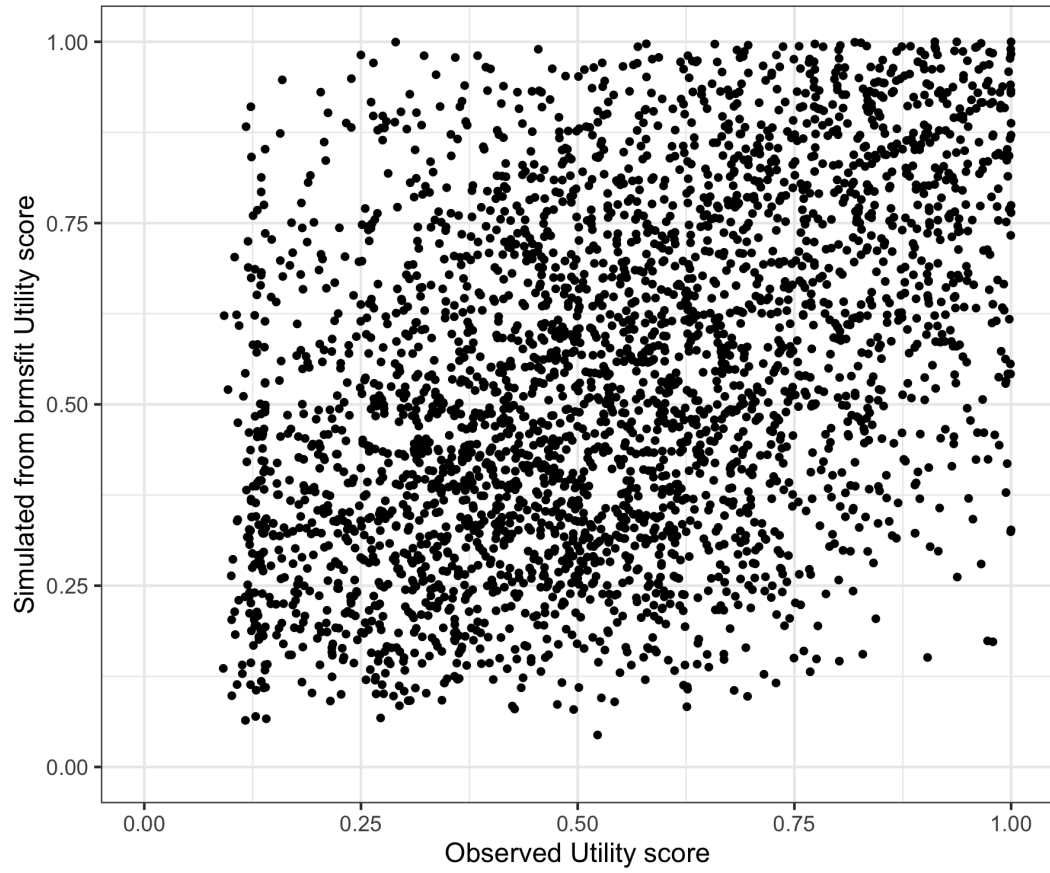


Figure 50: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

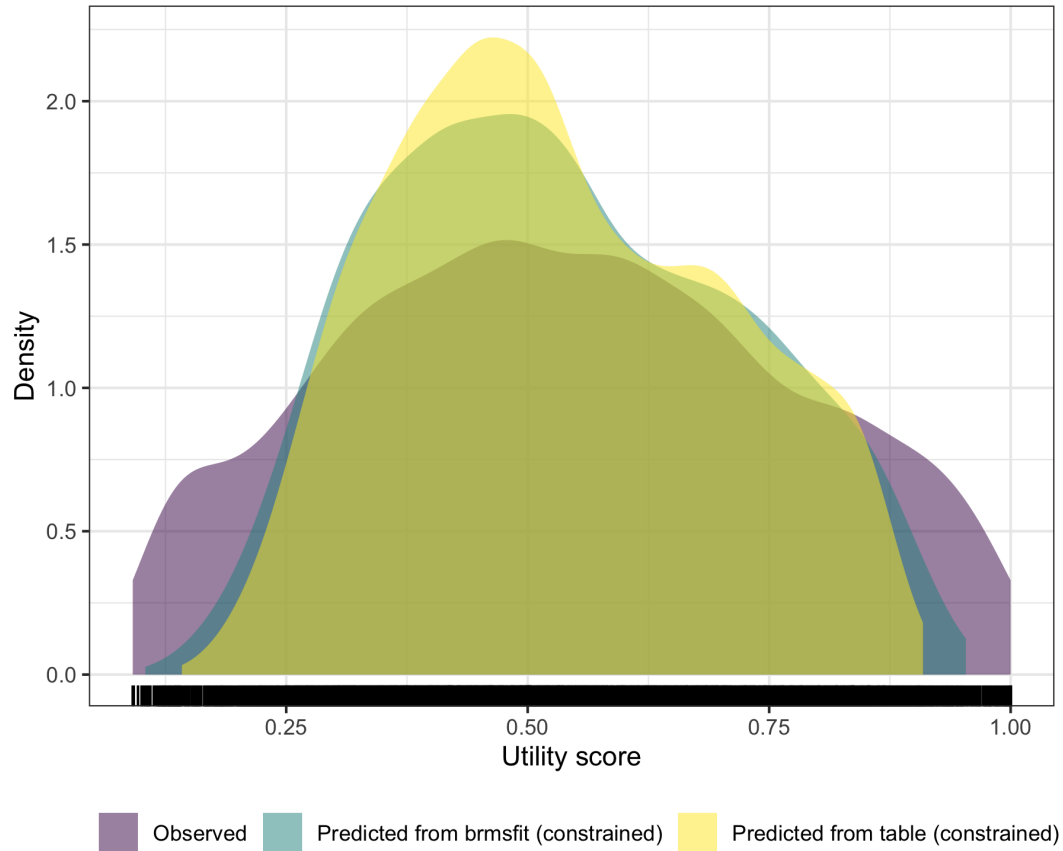


Figure 51: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

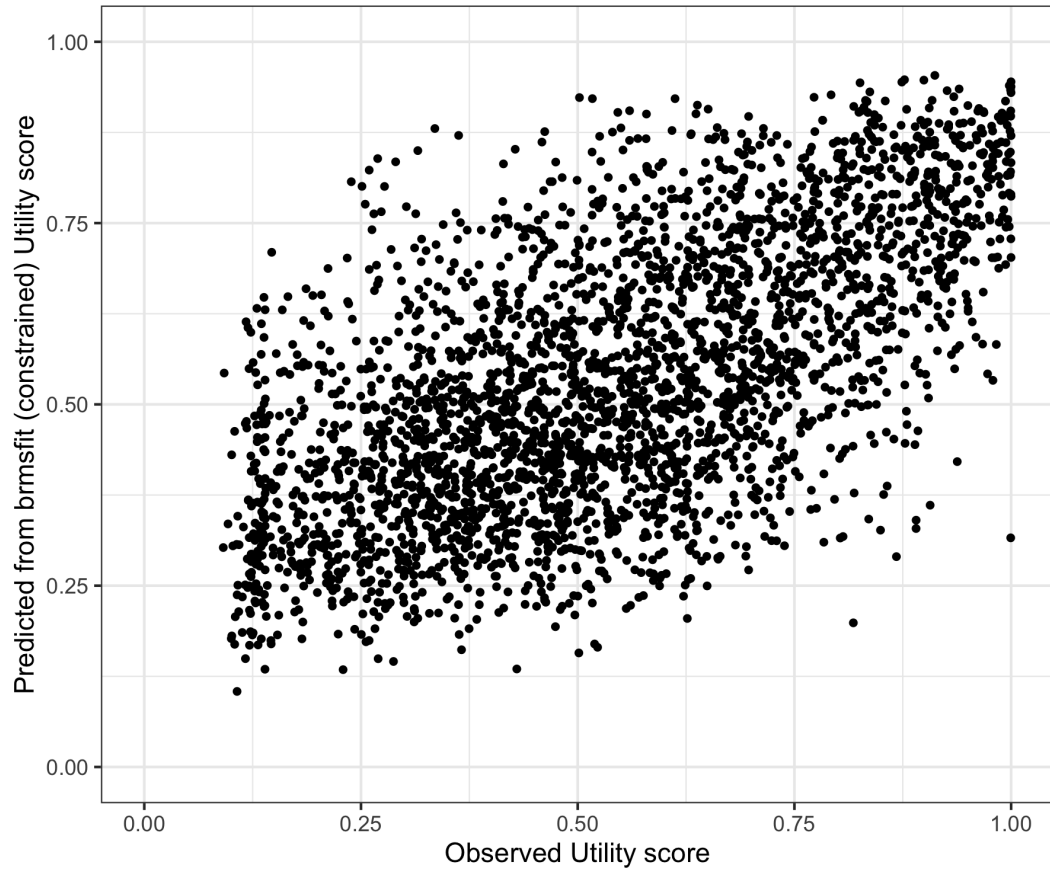


Figure 52: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

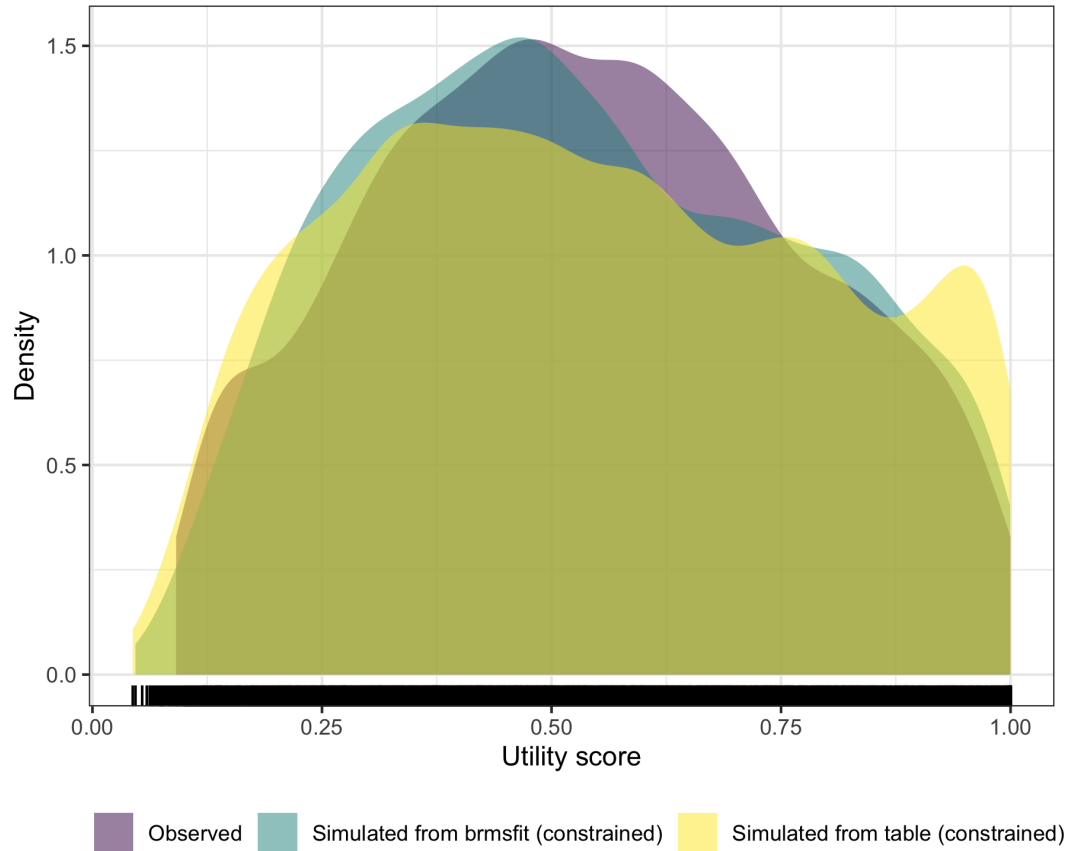


Figure 53: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

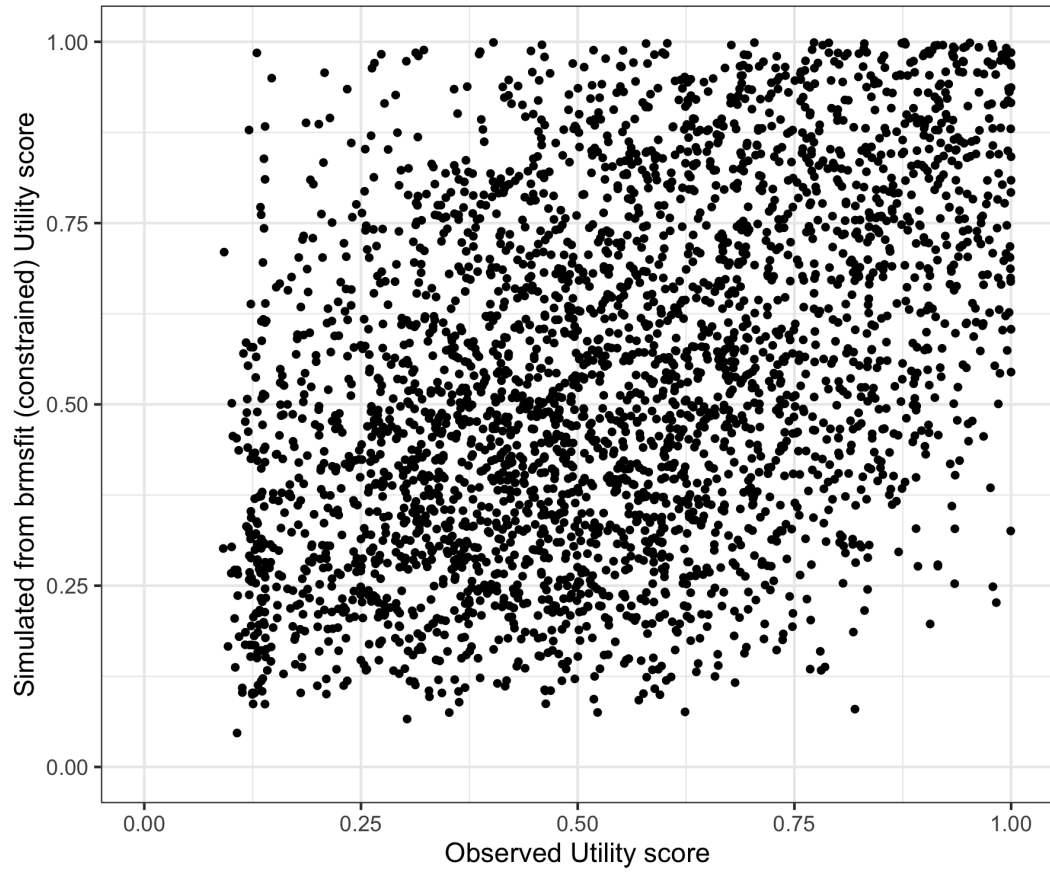


Figure 54: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

7 K10 with dage generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); and - dage (age). The catalogue reference for this model is K10_dage_1_GLM_GSN_LOG.

Table 13: K10 with dage generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3996)							
sd(Intercept)	0.04	0.02	0.00	0.09	1.00	418	835
Population-Level Effects:							
Intercept	0.36	0.03	0.31	0.41	1.00	10 479	6 148
K10_scaled	-3.27	0.06	-3.38	-3.15	1.00	11 563	6 165
dage	-0.01	0.00	-0.01	-0.00	1.00	10 325	5 894
Family Specific Parameters:							
sigma	0.17	0.00	0.16	0.18	1.00	830	1 082

Formula: AQOL6D ~K10_scaled + dage + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 14: K10 with dage generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.44	0.01	0.418 , 0.475
RMSE	0.24	0.00	0.239 , 0.244

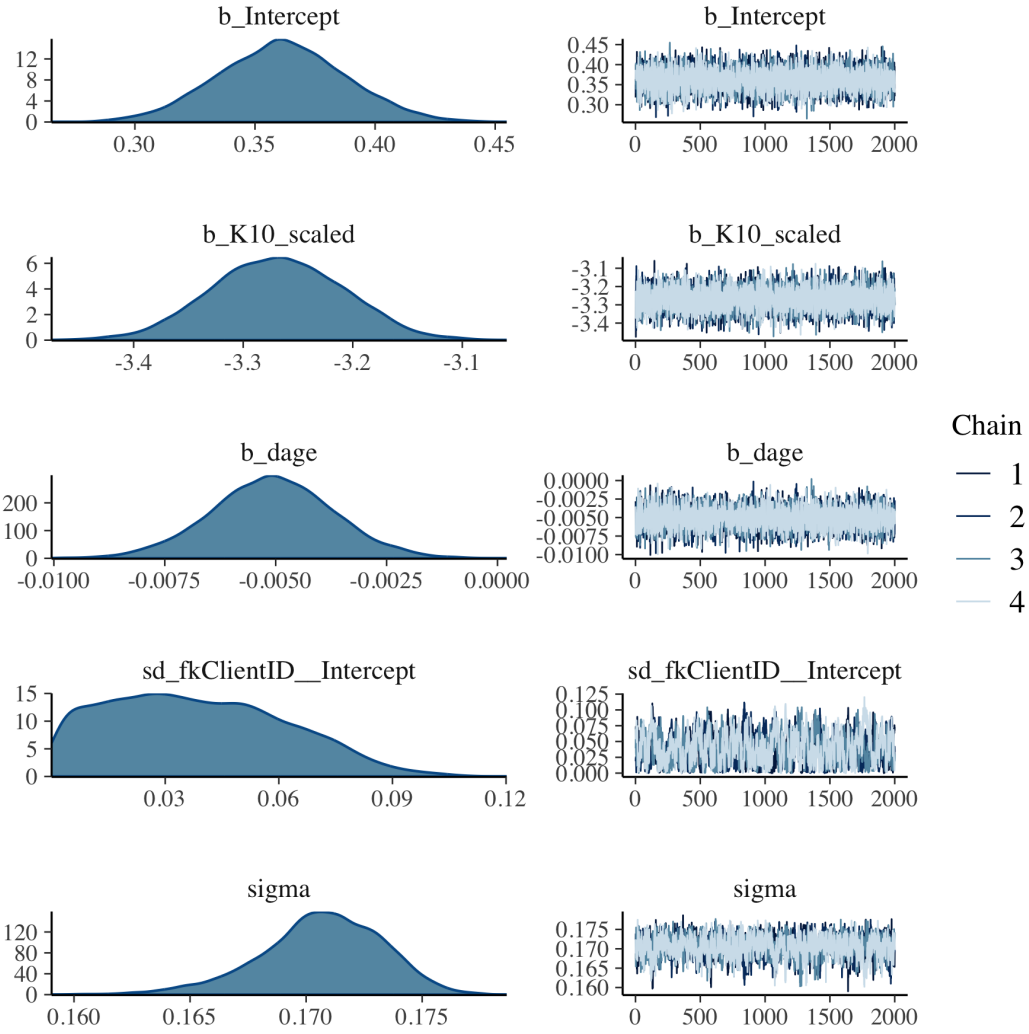


Figure 55: K10 with dage generalised linear mixed model with Gaussian distribution and log link population and group level effects

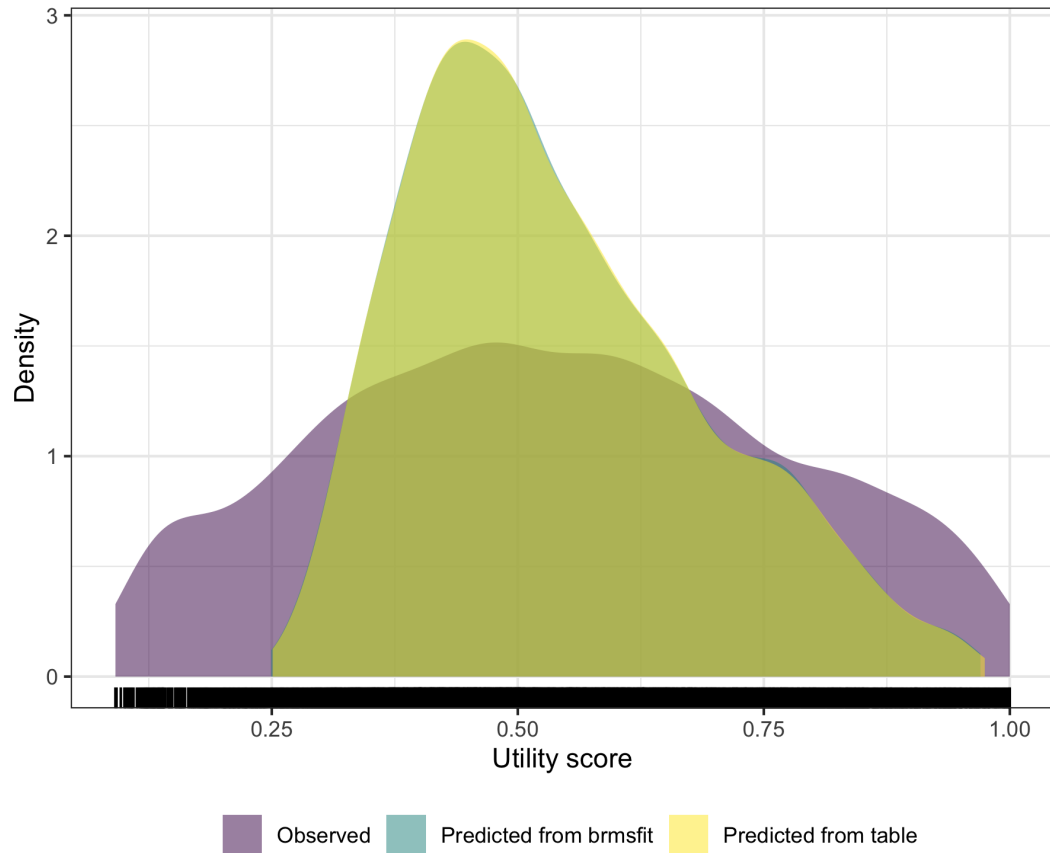


Figure 56: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

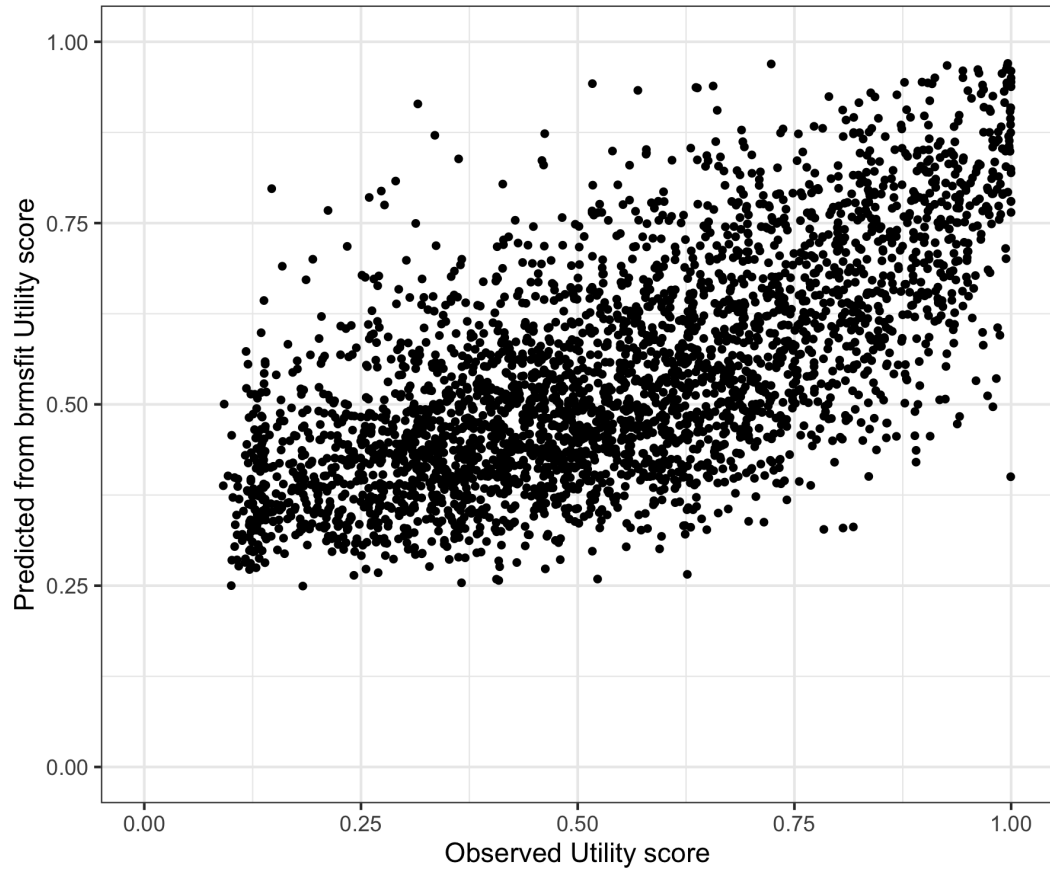


Figure 57: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

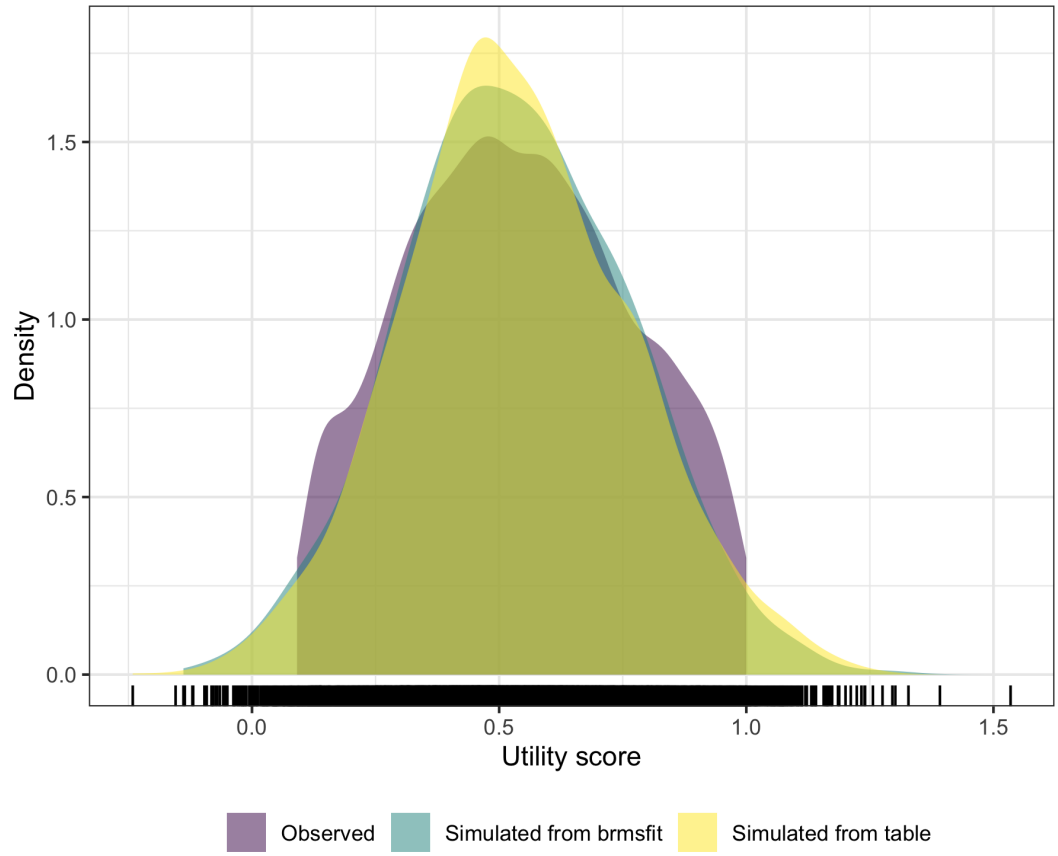


Figure 58: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

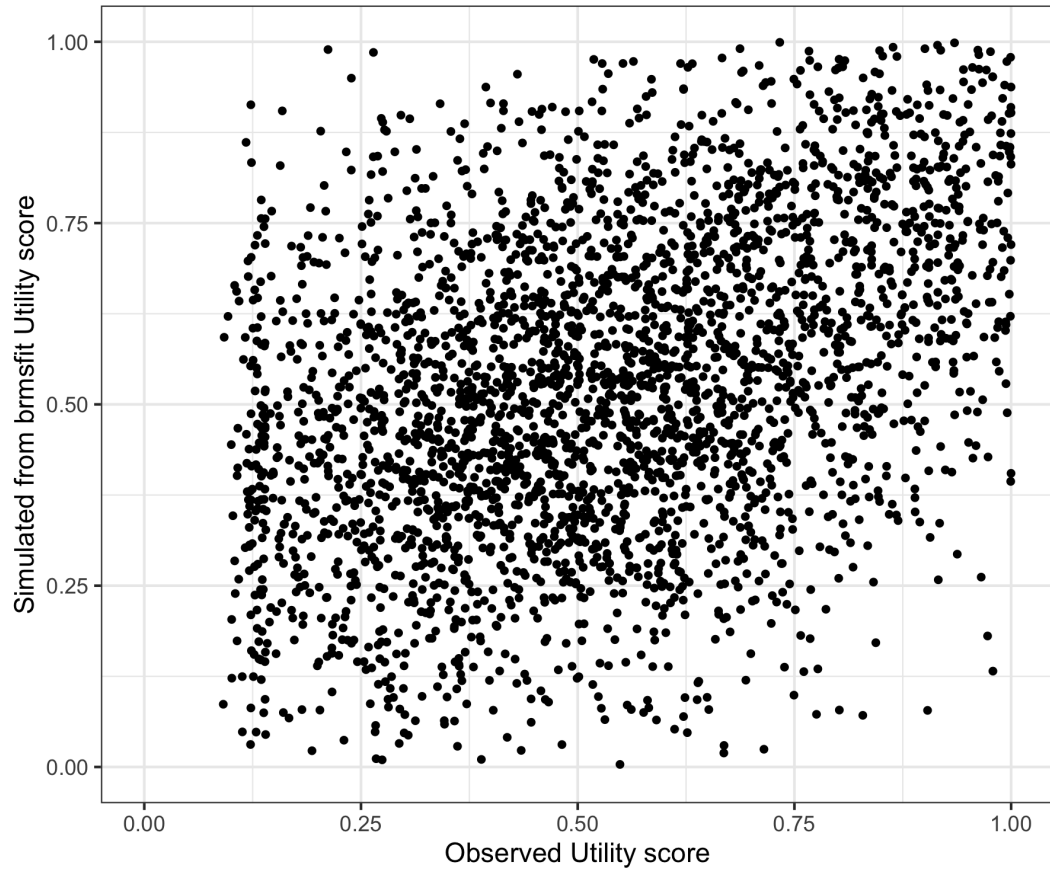


Figure 59: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

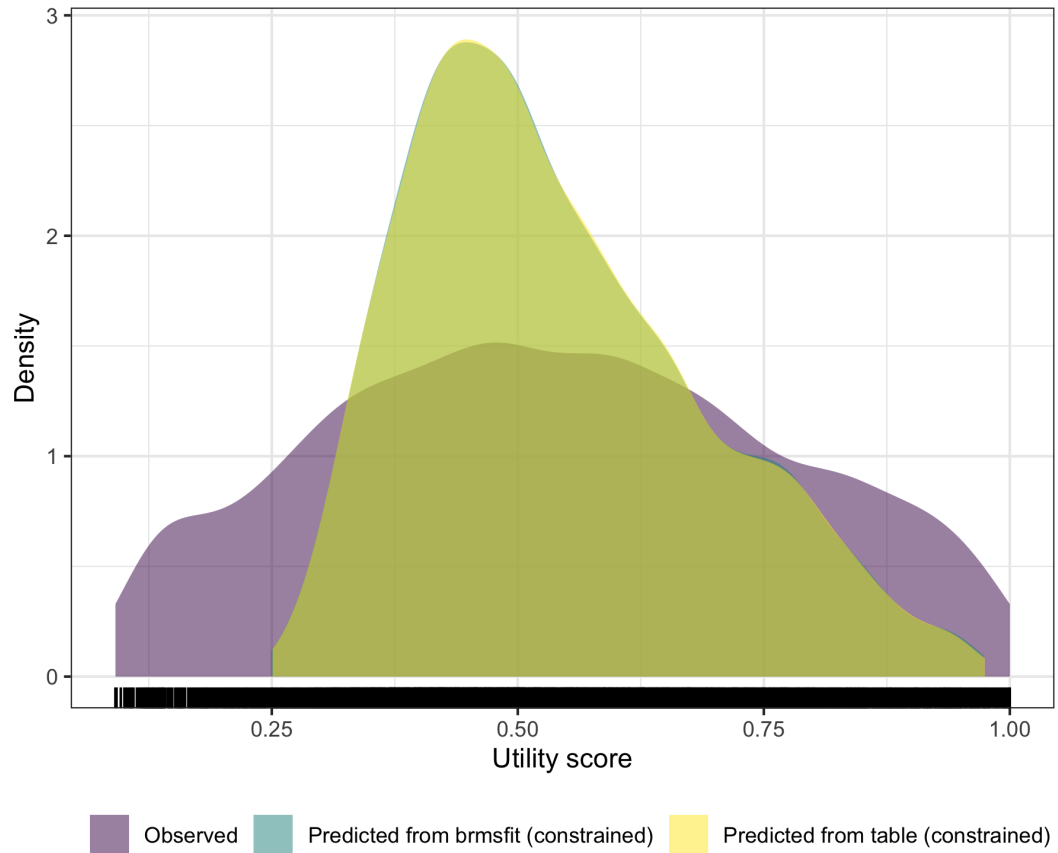


Figure 60: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

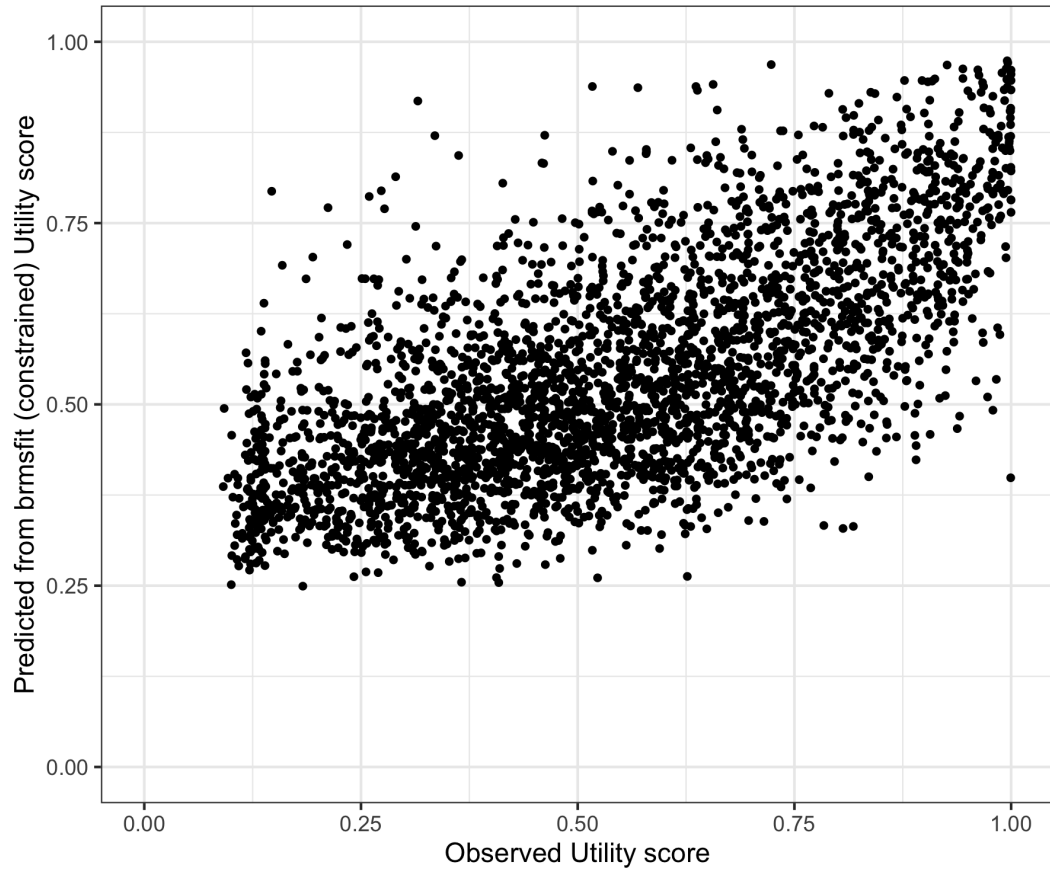


Figure 61: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

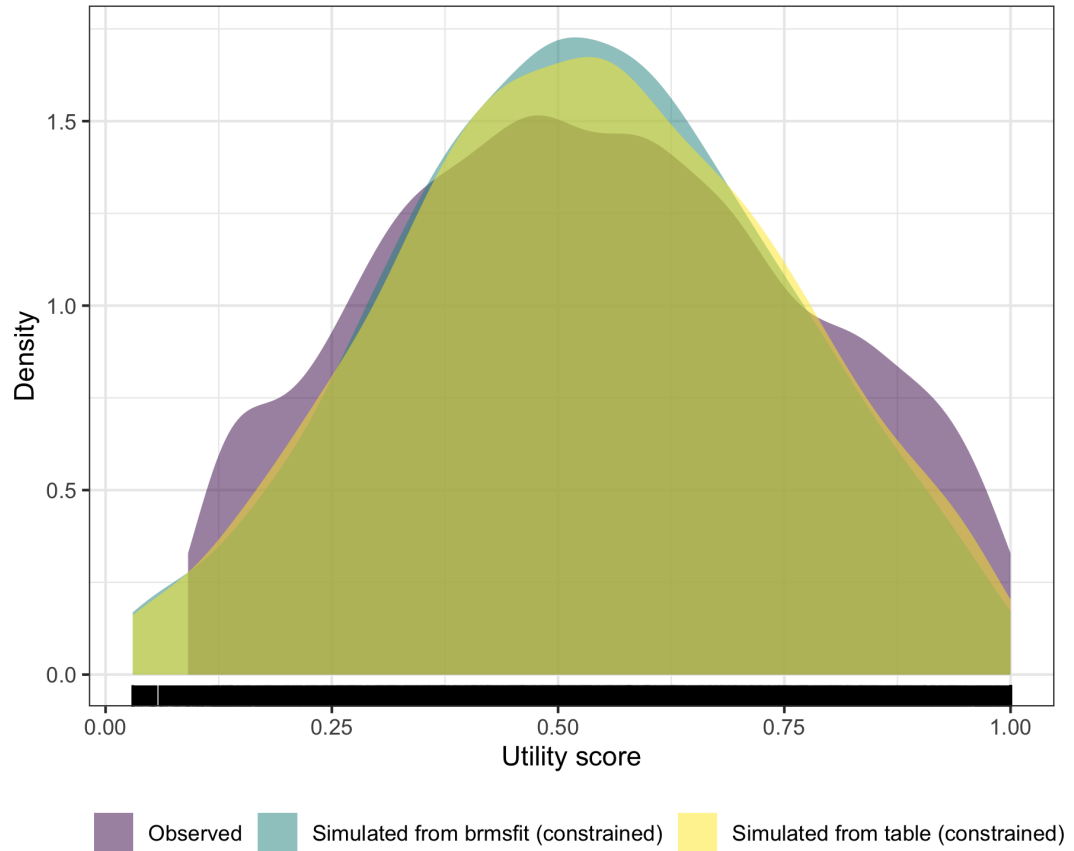


Figure 62: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

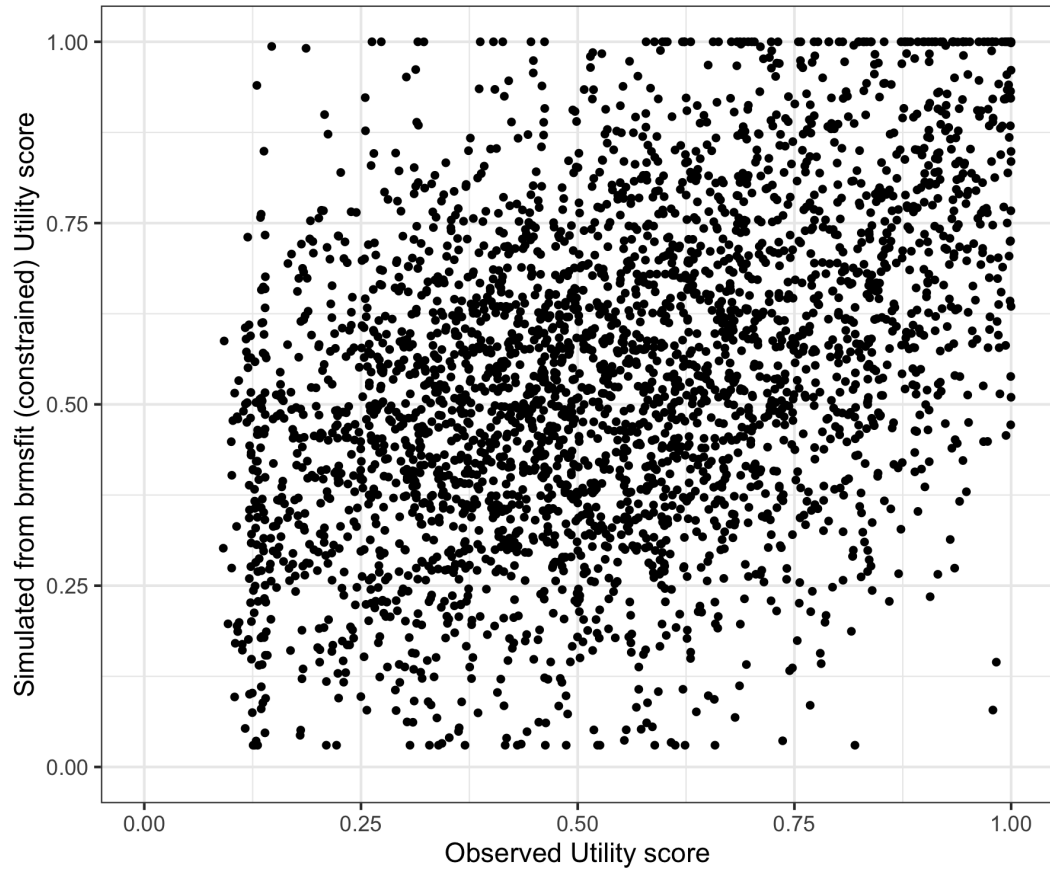


Figure 63: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

8 K10 with dage linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); and - dage (age). The catalogue reference for this model is K10_dage_1_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 42 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>.

Table 15: K10 with dage linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3996)							
sd(Intercept)	0.28	0.16	0.01	0.52	1.47	8	26
Population-Level Effects:							
Intercept	1.68	0.06	1.57	1.79	1.00	7 463	5 743
K10_scaled	-6.06	0.11	-6.28	-5.84	1.00	5 667	4 685
dage	-0.01	0.00	-0.02	-0.01	1.00	8 083	5 830
Family Specific Parameters:							
sigma	0.50	0.10	0.31	0.61	1.47	8	26

Formula: AQOL6D_CLL ~K10_scaled + dage + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 16: K10 with dage linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.59	0.14	0.415 , 0.849
RMSE	1.08	0.02	1.062 , 1.106

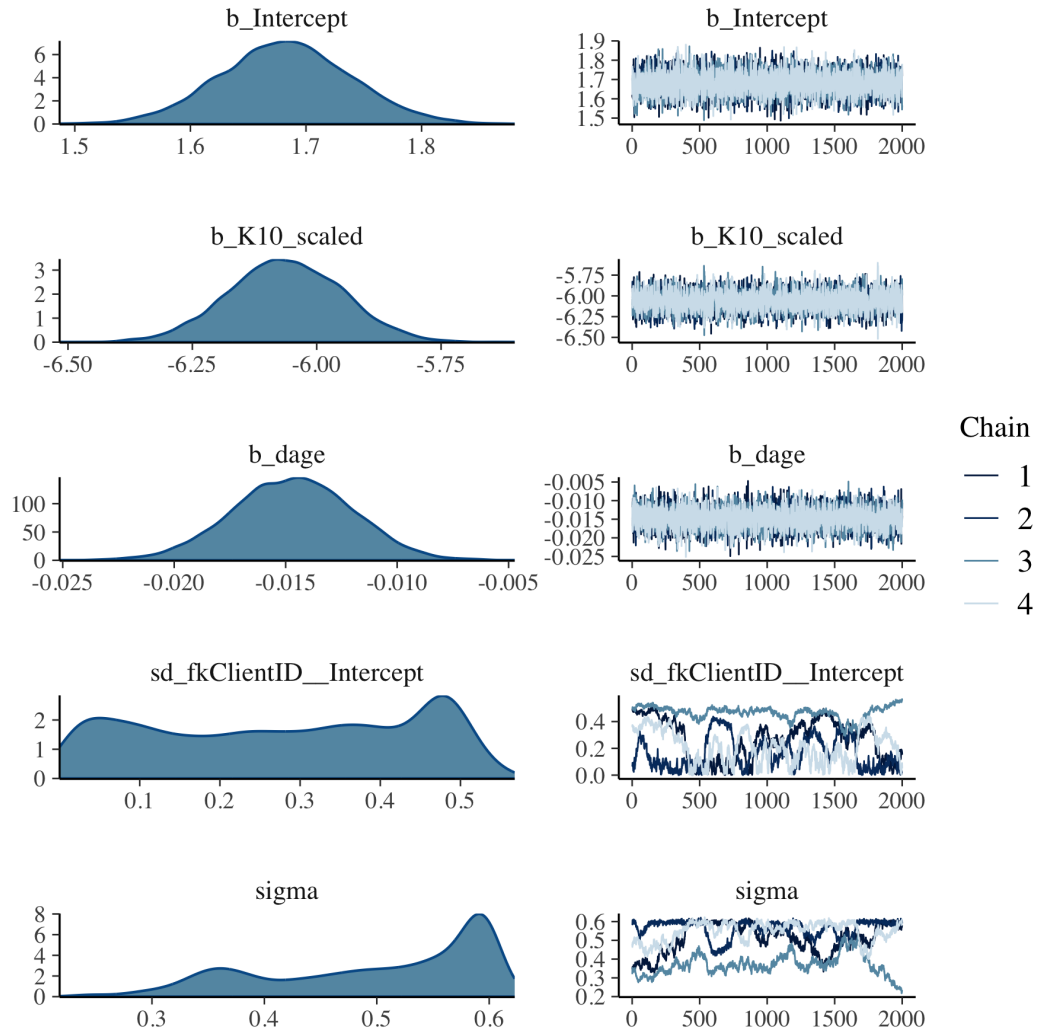


Figure 64: K10 with dage linear mixed model with complementary log log transformation population and group level effects

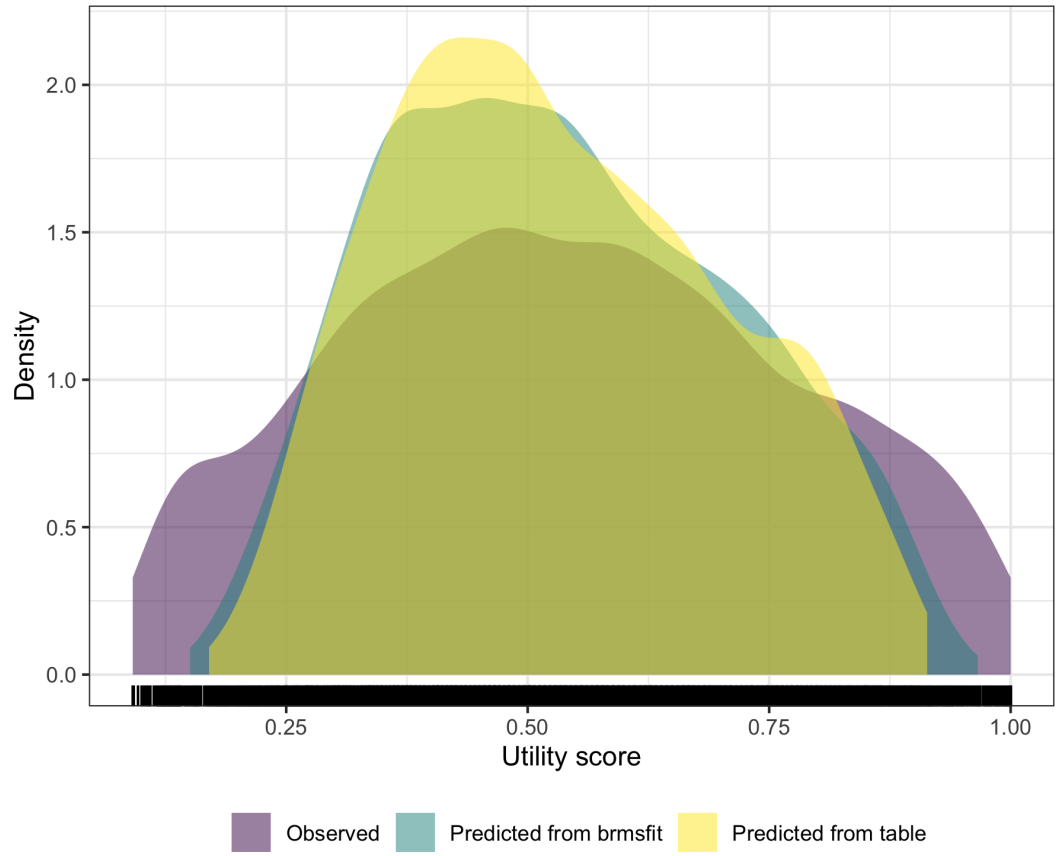


Figure 65: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

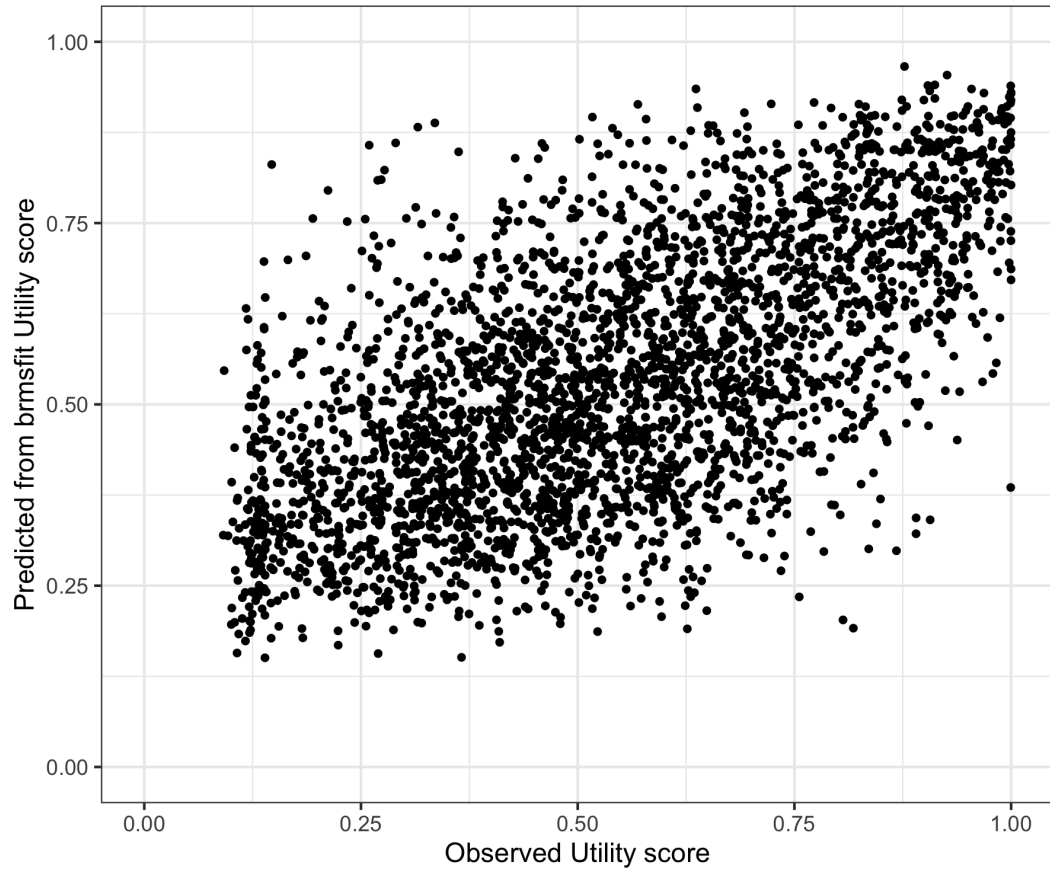


Figure 66: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

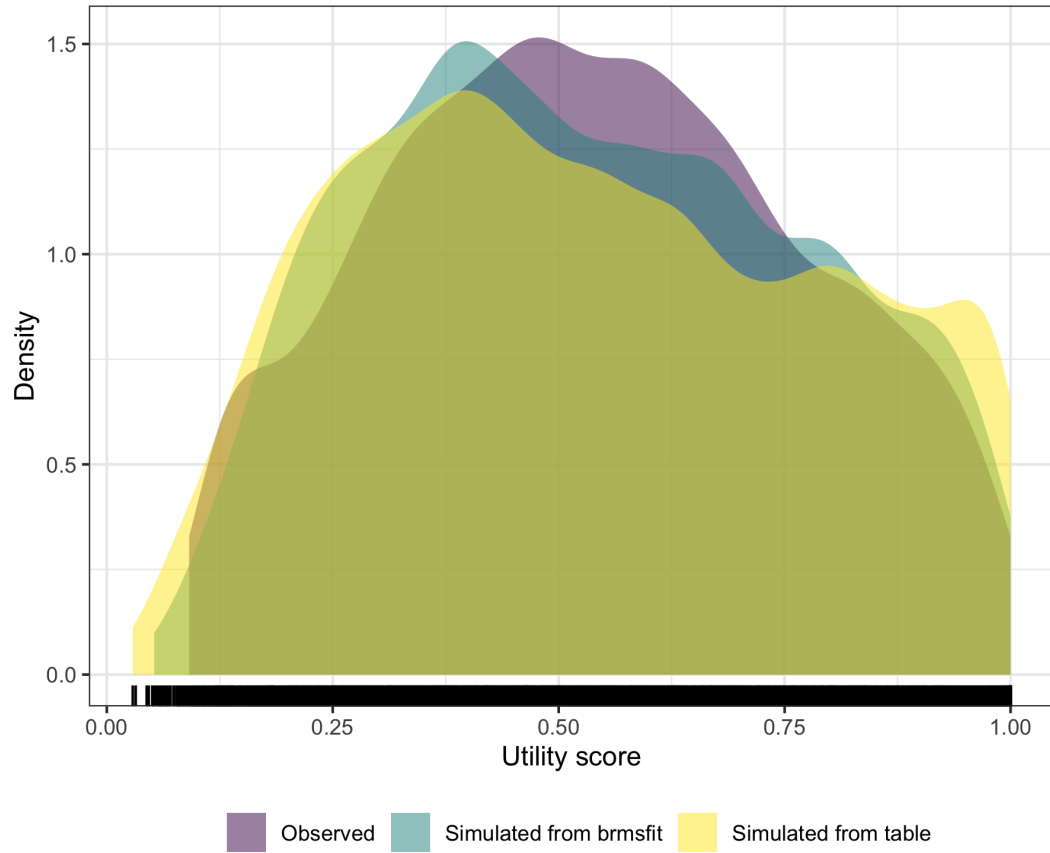


Figure 67: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

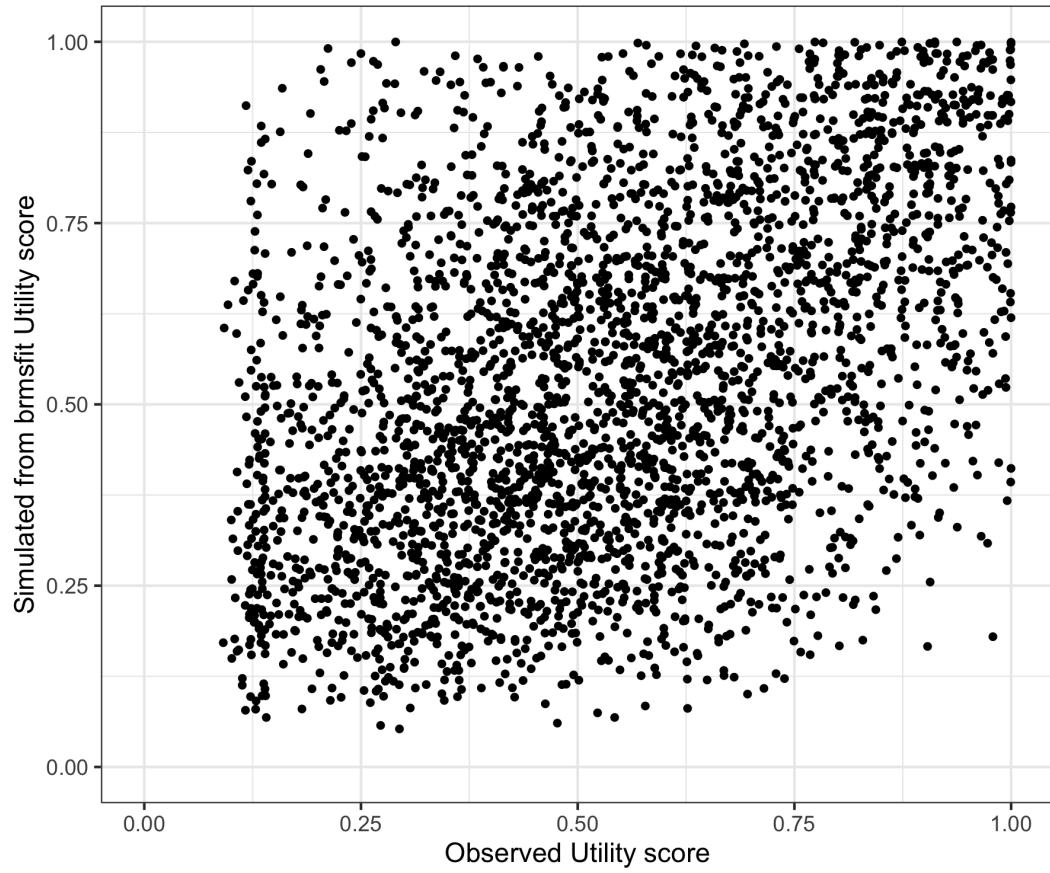


Figure 68: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

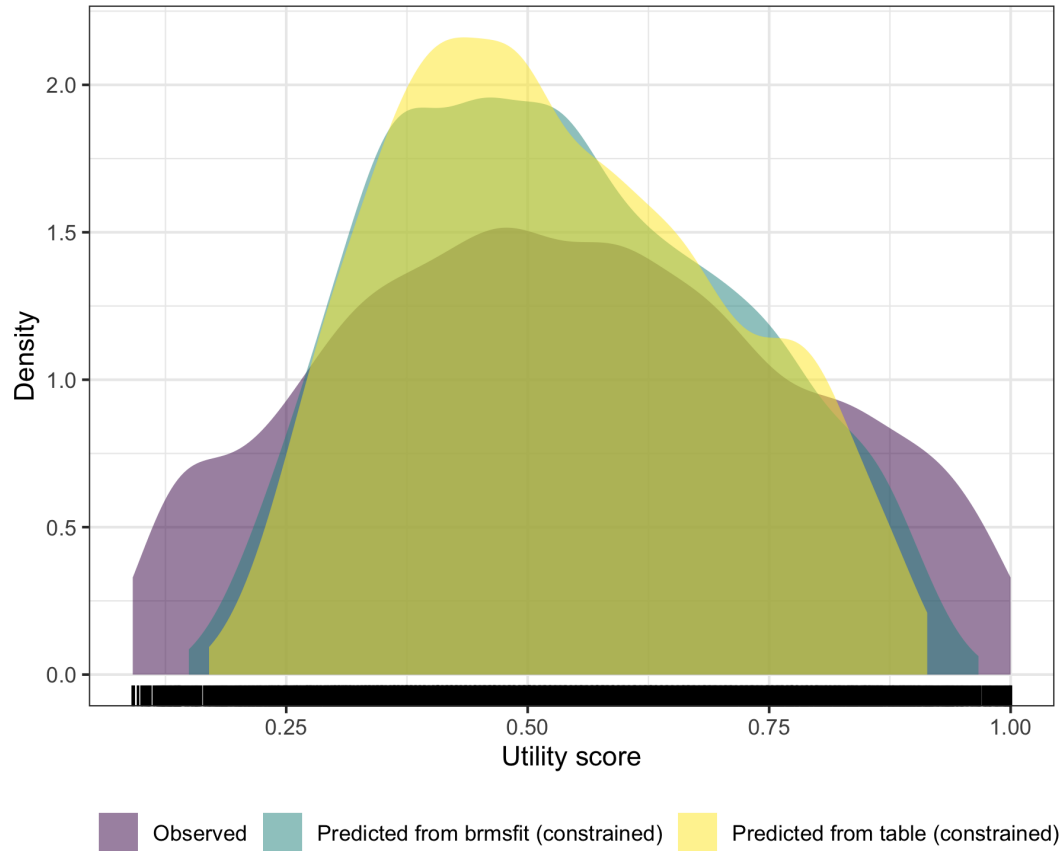


Figure 69: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

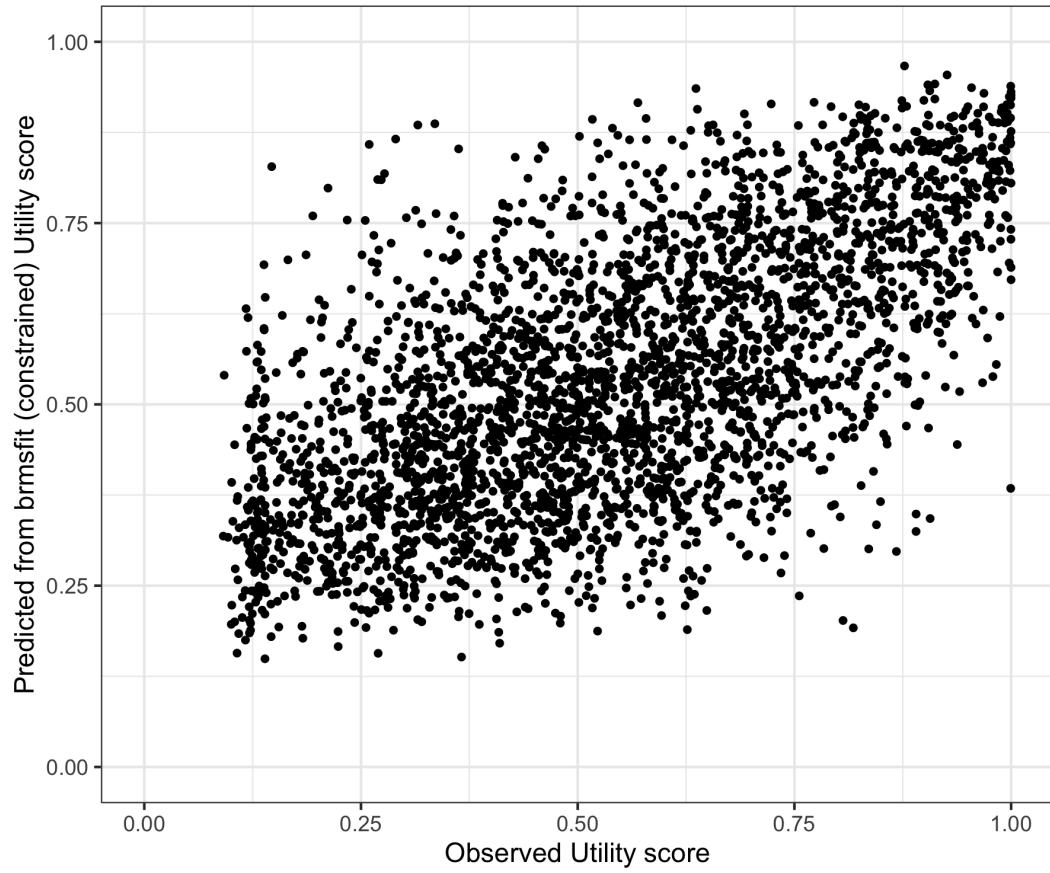


Figure 70: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

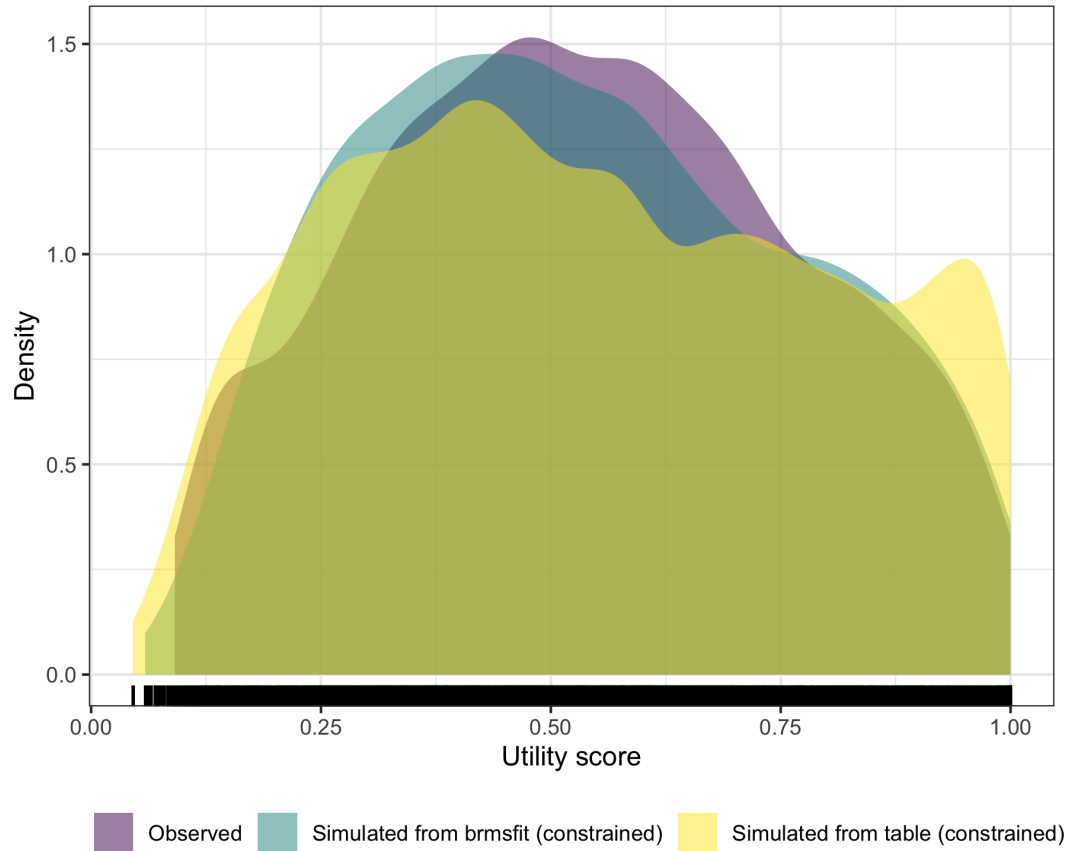


Figure 71: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

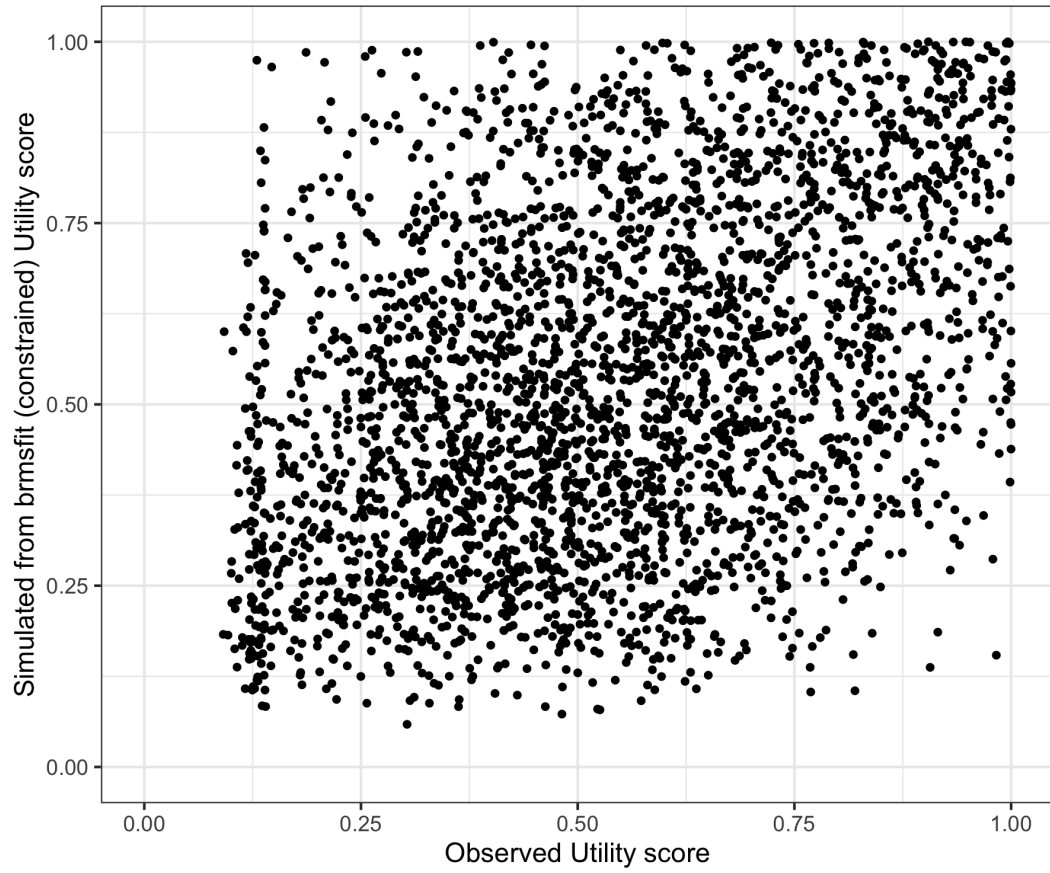


Figure 72: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

9 K10 with dgender generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is K10_dgender_1_GLM_GSN_LOG.

Table 17: K10 with dgender generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3996)							
sd(Intercept)	0.04	0.02	0.00	0.08	1.00	584	1 003
Population-Level Effects:							
Intercept	0.26	0.02	0.22	0.29	1.00	12 624	6 353
K10_scaled	-3.26	0.06	-3.38	-3.14	1.00	12 050	6 234
dgenderMale	0.03	0.01	0.01	0.05	1.00	16 115	6 052
dgenderOther	-0.01	0.04	-0.09	0.06	1.00	16 258	5 944
Family Specific Parameters:							
sigma	0.17	0.00	0.17	0.18	1.00	1 338	1 469

Formula: AQOL6D ~K10_scaled + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 18: K10 with dgender generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.44	0.01	0.417 , 0.471
RMSE	0.24	0.00	0.24 , 0.244

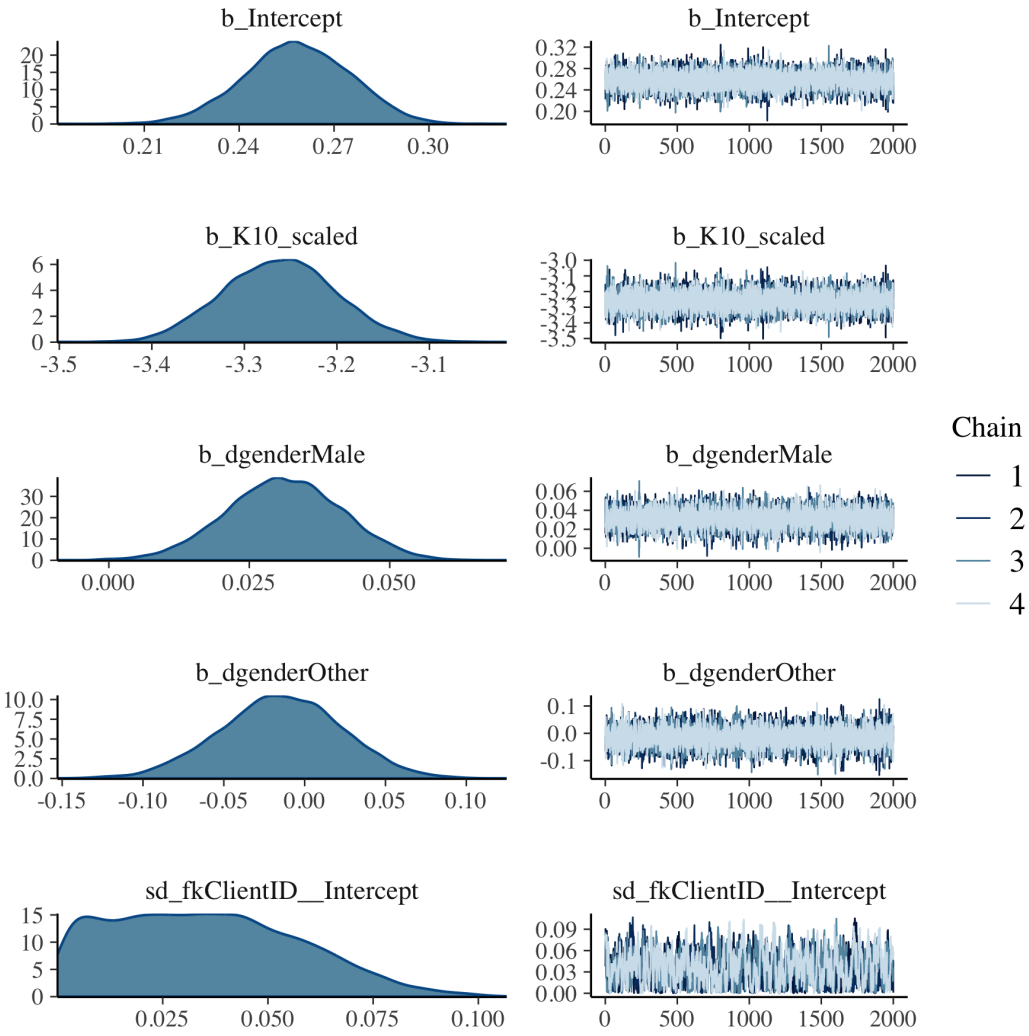


Figure 73: K10 with dgender generalised linear mixed model with Gaussian distribution and log link population level effects

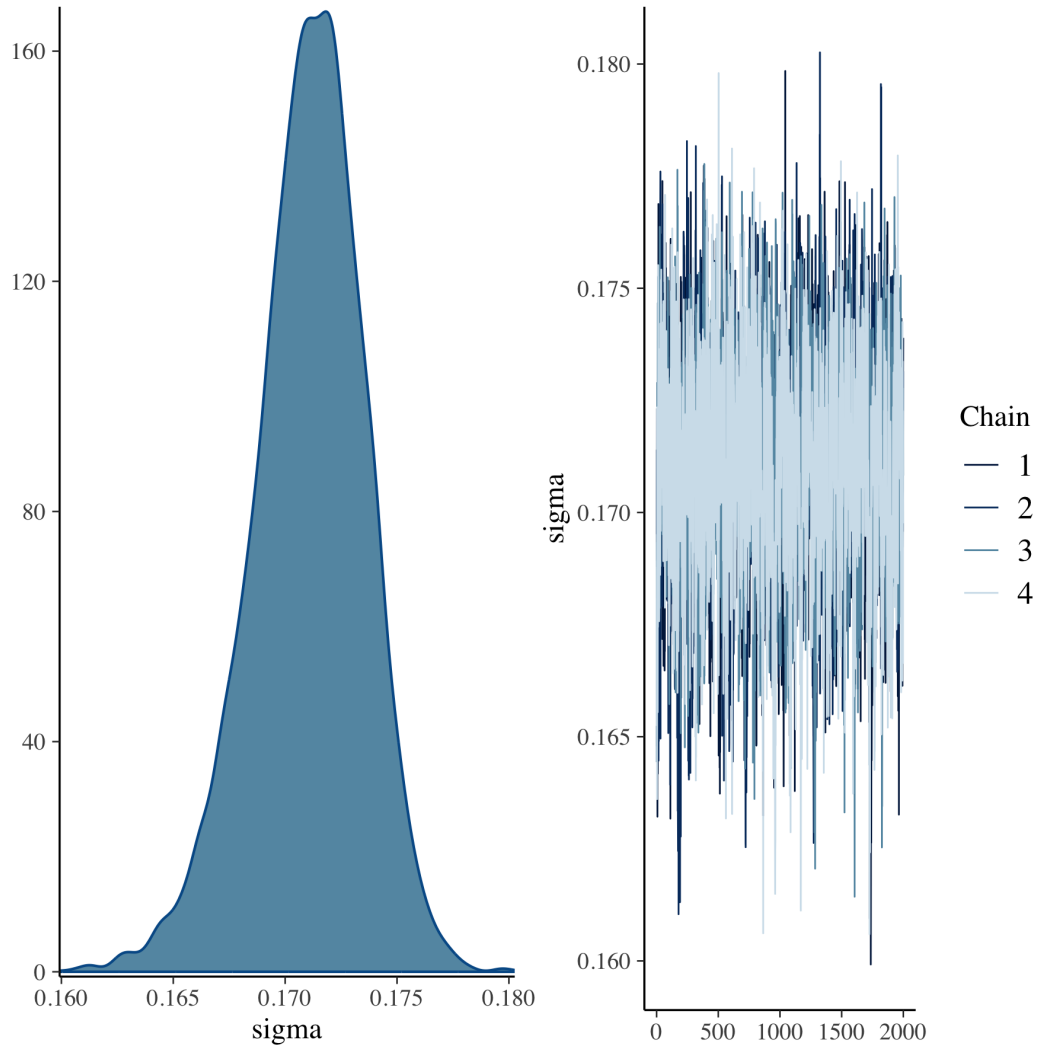


Figure 74: K10 with dgender generalised linear mixed model with Gaussian distribution and log link group level effects

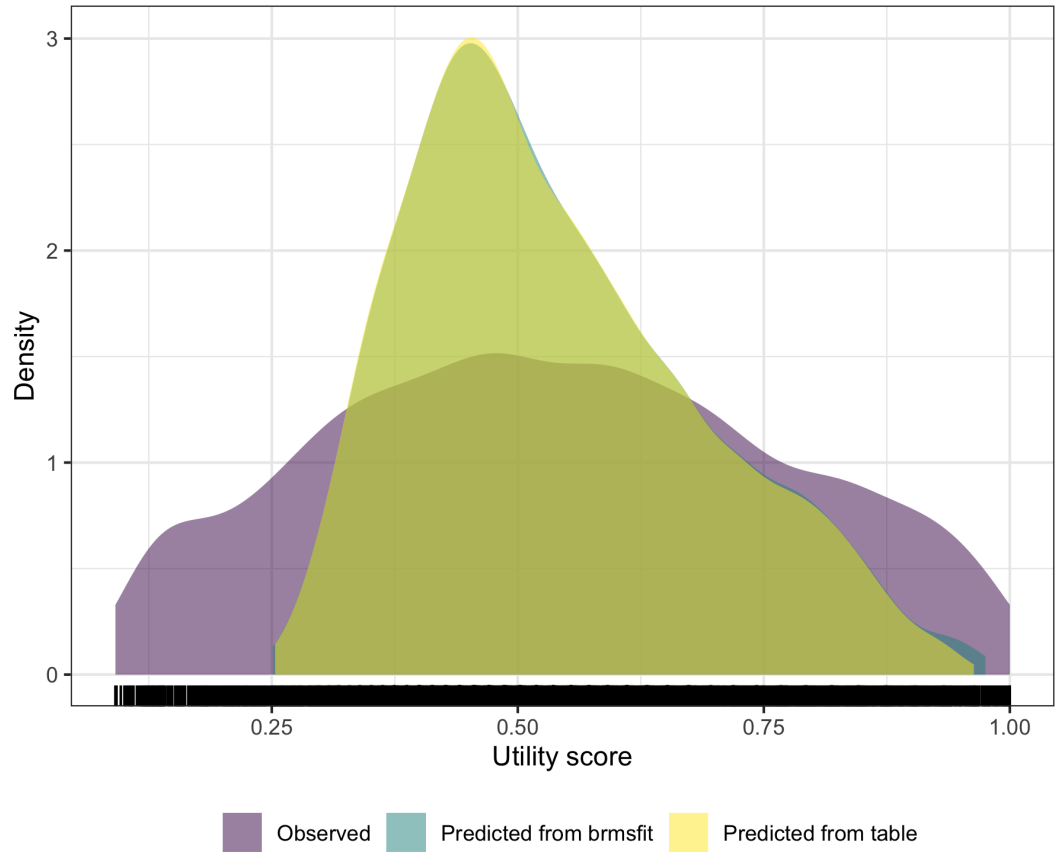


Figure 75: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

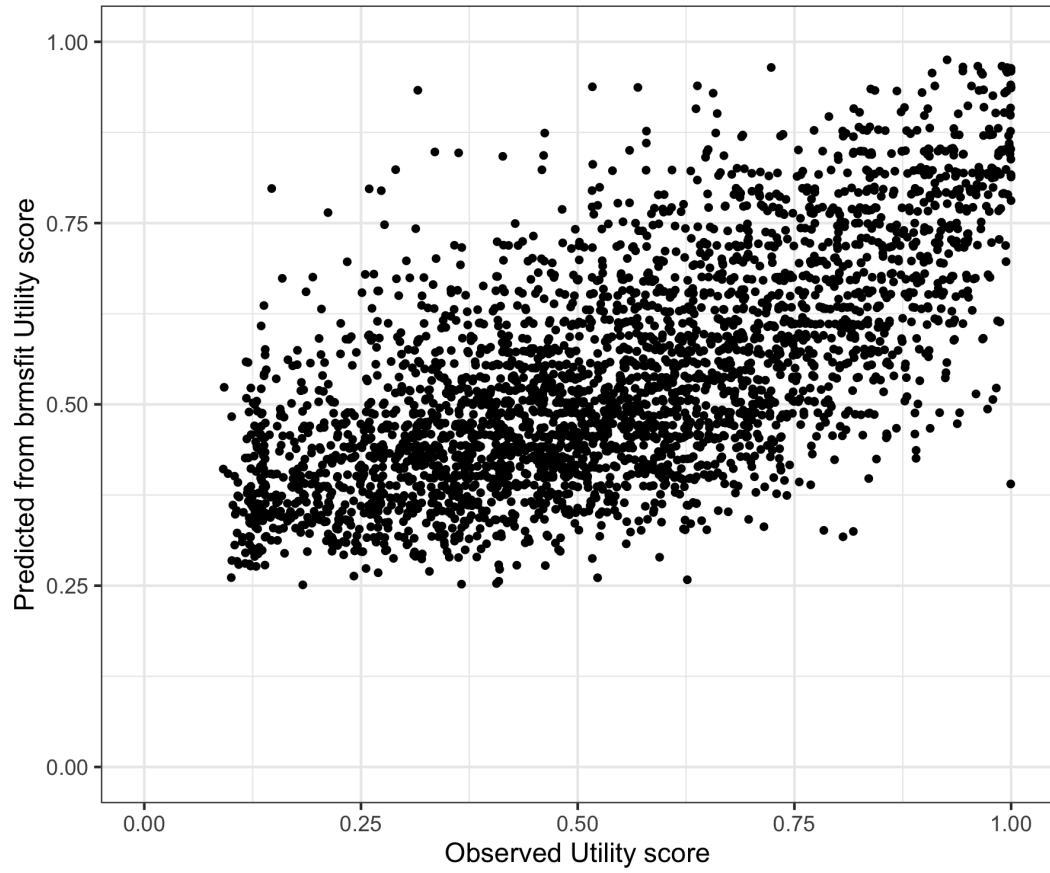


Figure 76: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

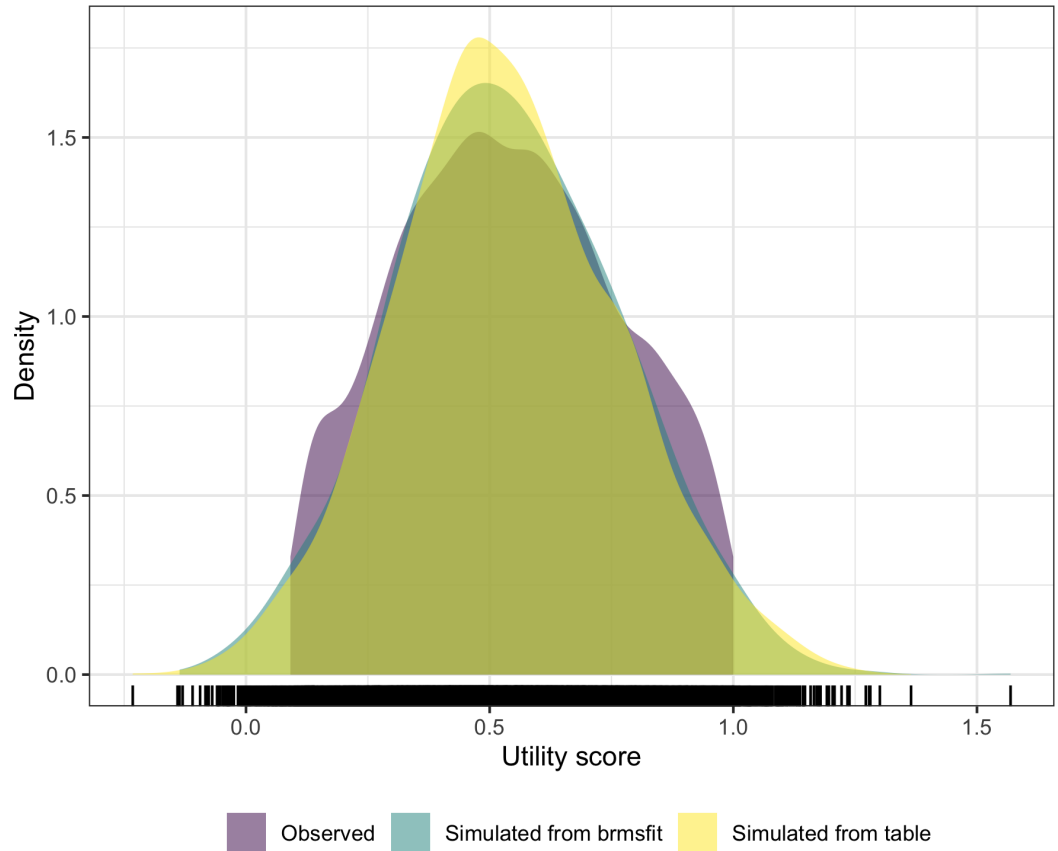


Figure 77: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

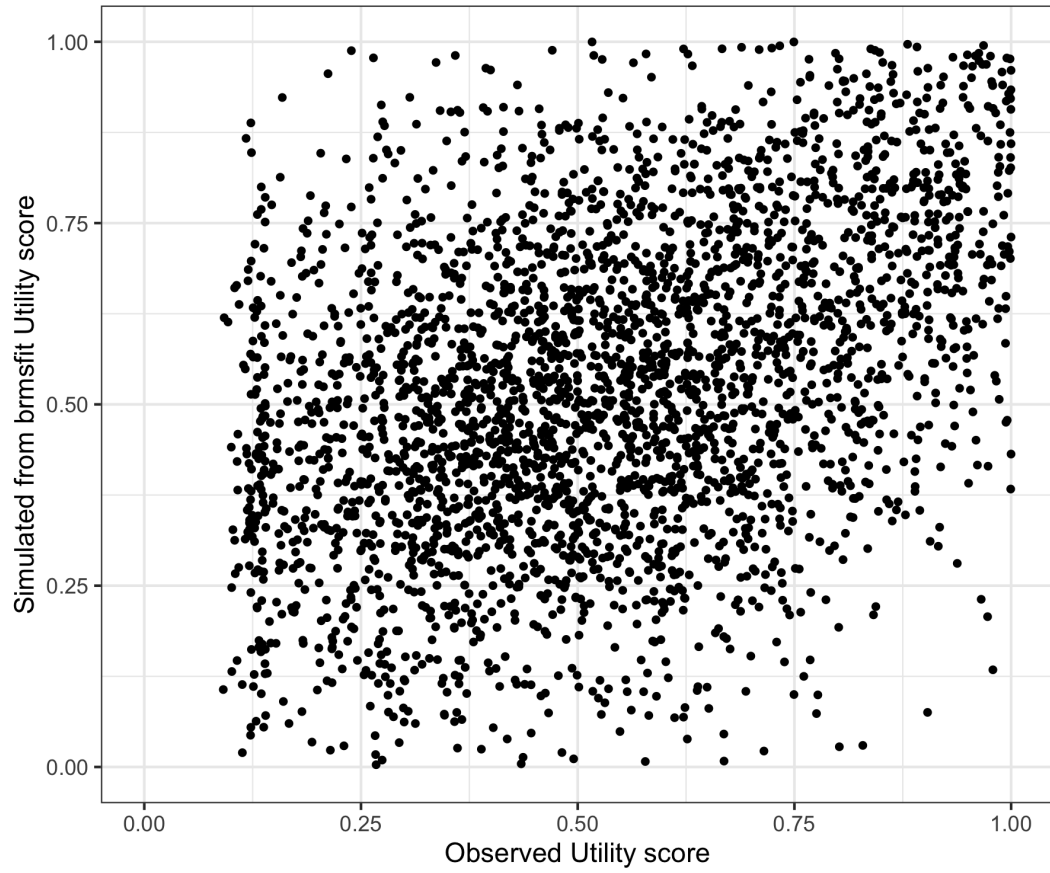


Figure 78: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

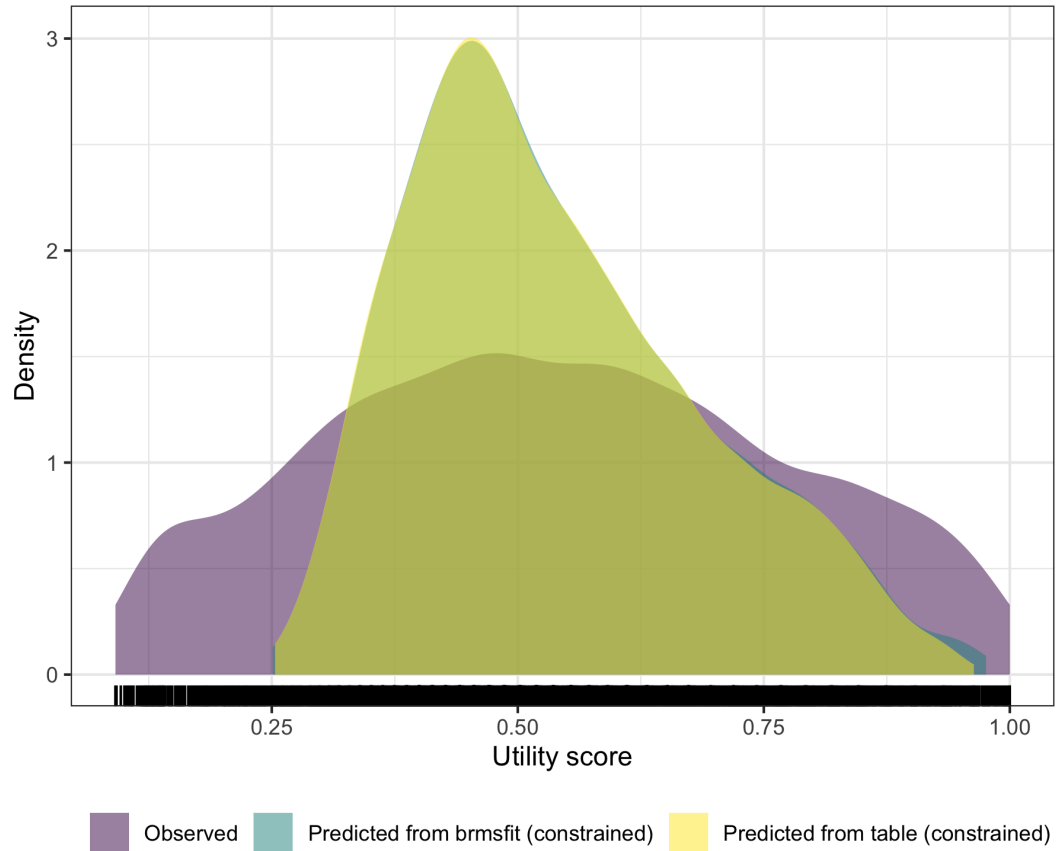


Figure 79: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

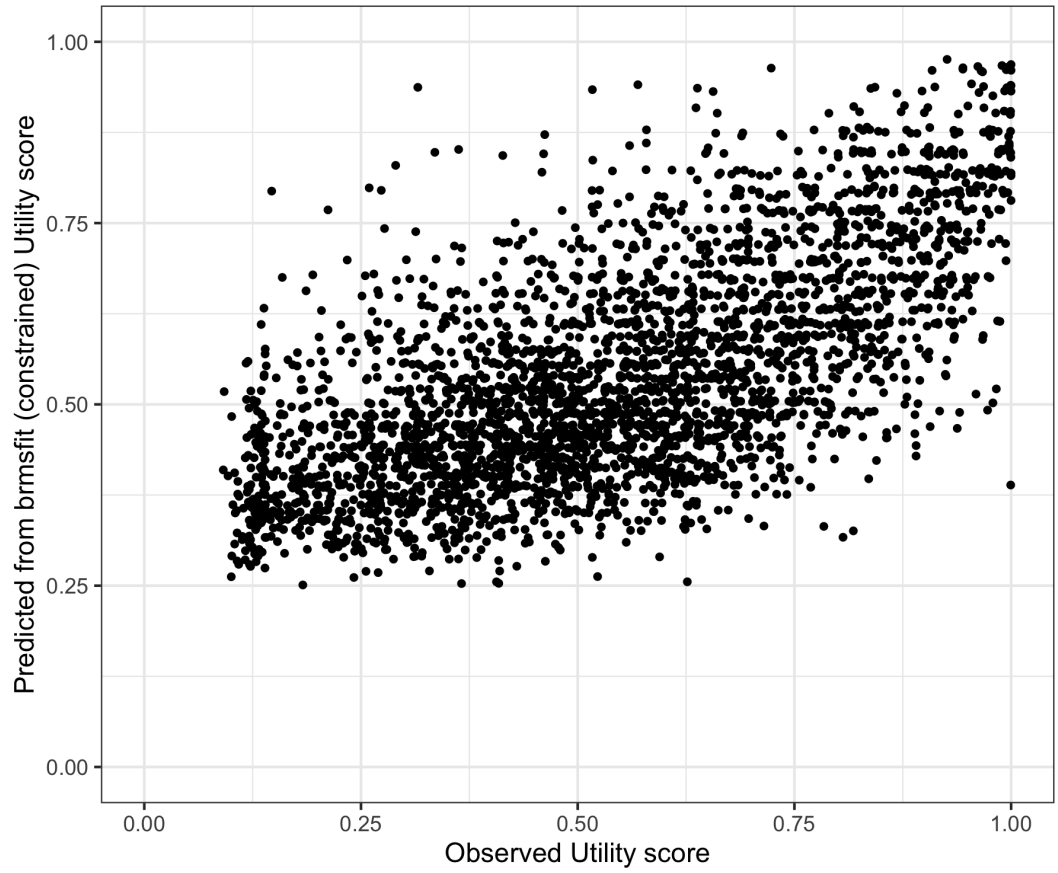


Figure 80: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

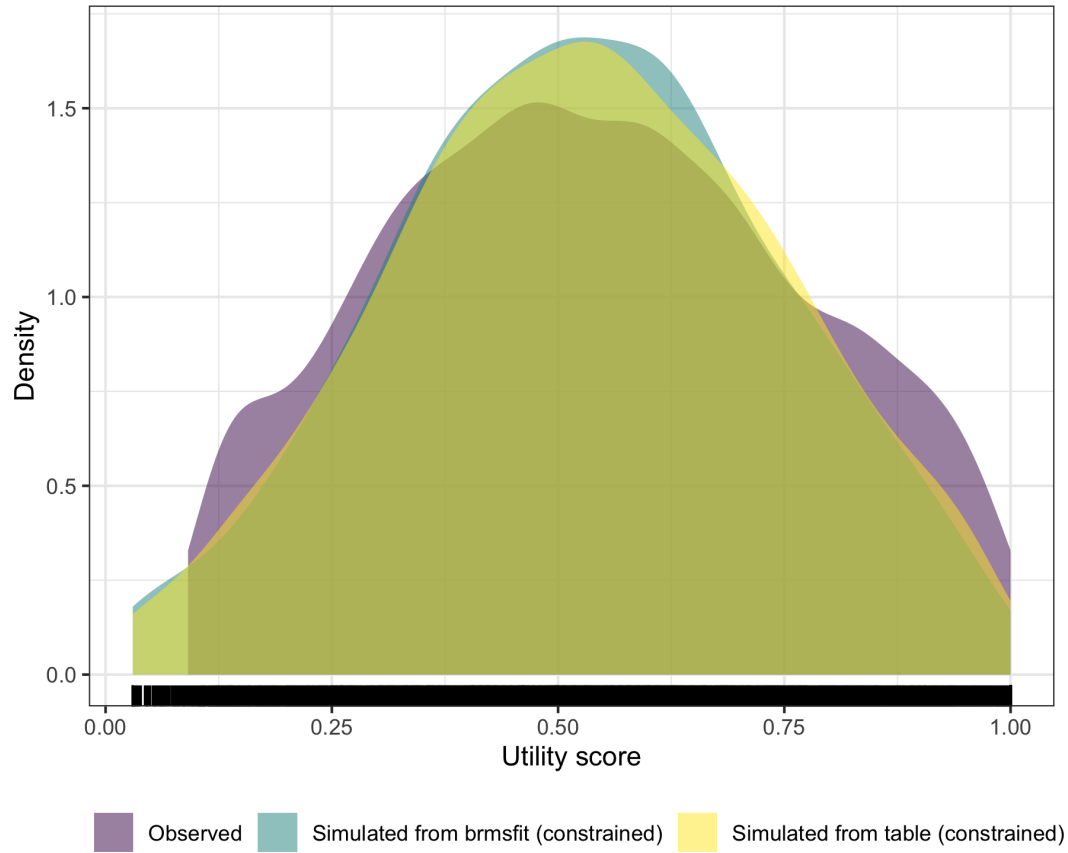


Figure 81: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

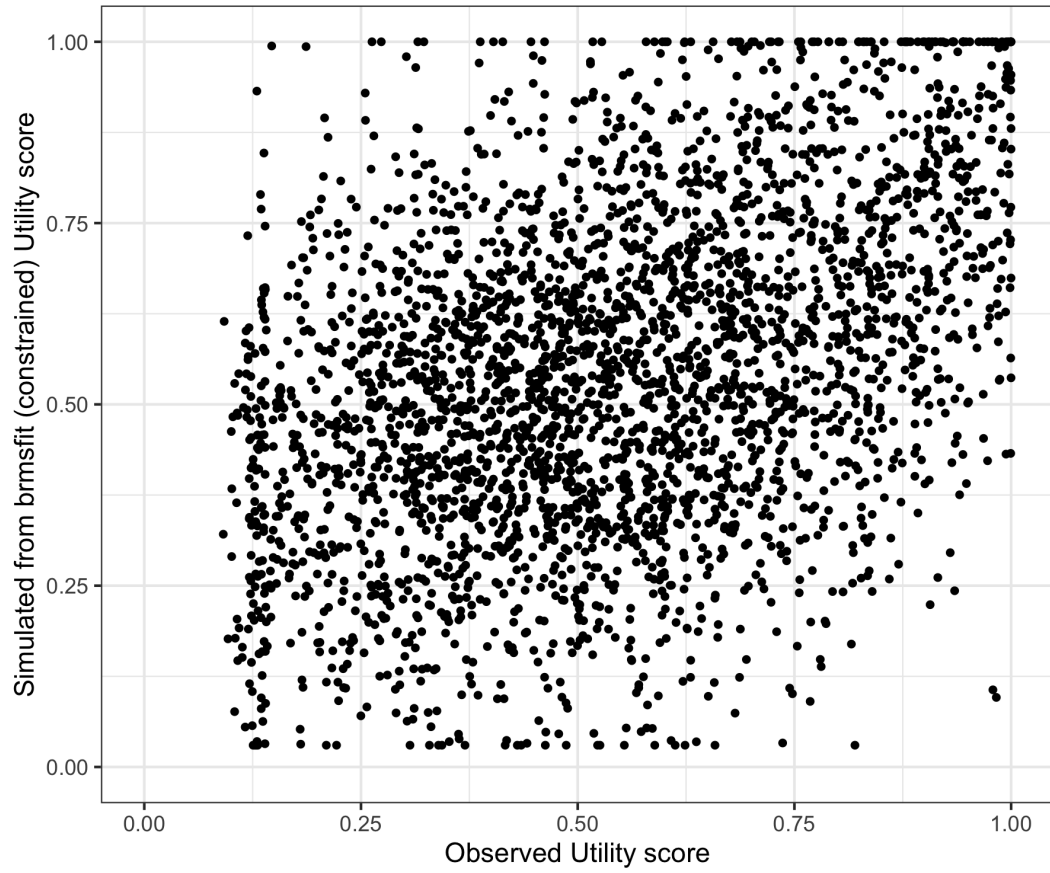


Figure 82: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

10 K10 with dgender linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is K10_dgender_1_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 32 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>.

Table 19: K10 with dgender linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3996)							
sd(Intercept)	0.31	0.15	0.02	0.55	1.54	7	13
Population-Level Effects:							
Intercept	1.39	0.04	1.32	1.46	1.00	4 796	5 566
K10_scaled	-6.04	0.12	-6.27	-5.81	1.00	4 660	5 038
dgenderMale	0.07	0.02	0.03	0.11	1.00	4 986	4 649
dgenderOther	-0.03	0.06	-0.16	0.09	1.00	4 856	4 374
Family Specific Parameters:							
sigma	0.48	0.10	0.24	0.60	1.53	7	13

Formula: AQOL6D_CLL ~K10_scaled + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 20: K10 with dgender linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.61	0.15	0.416 , 0.907
RMSE	1.08	0.02	1.064 , 1.102

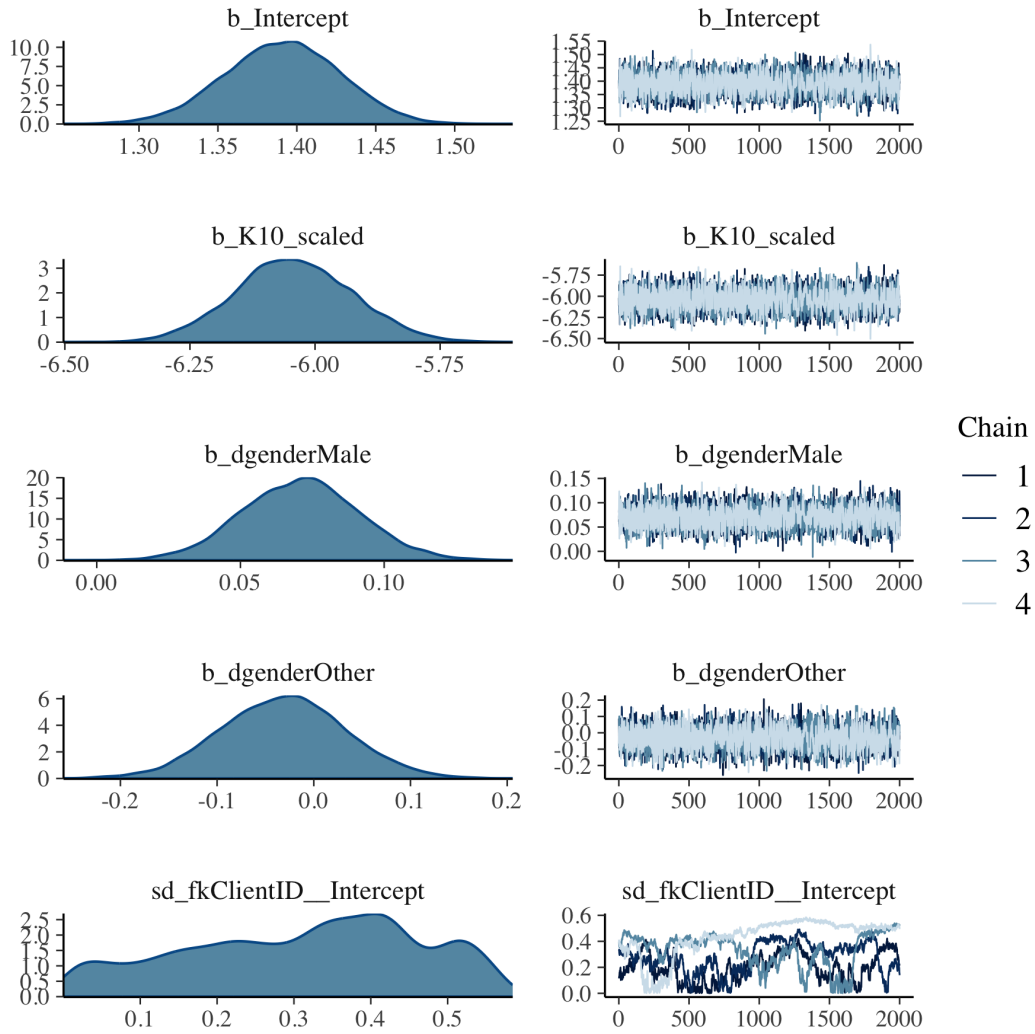


Figure 83: K10 with dgender linear mixed model with complementary log log transformation population level effects

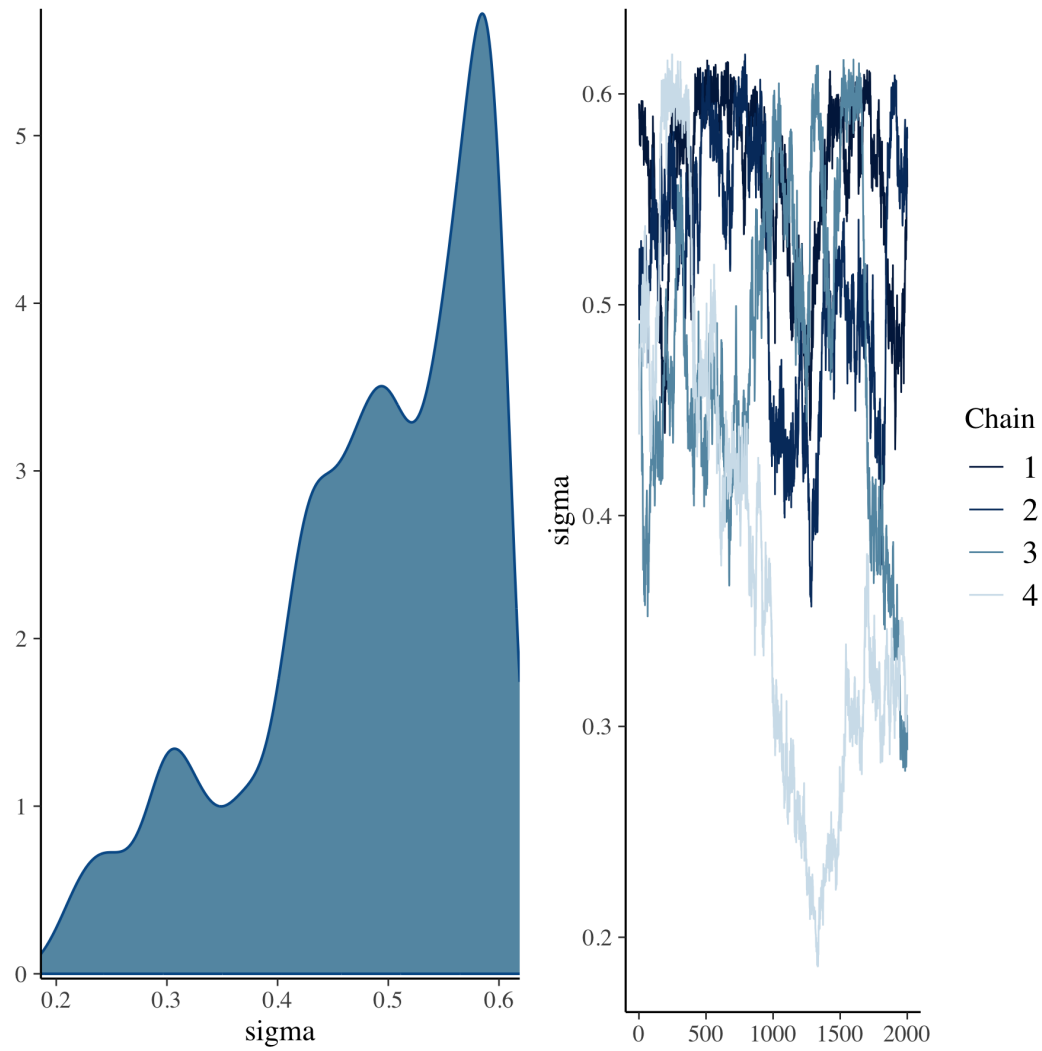


Figure 84: K10 with dgender linear mixed model with complementary log log transformation group level effects

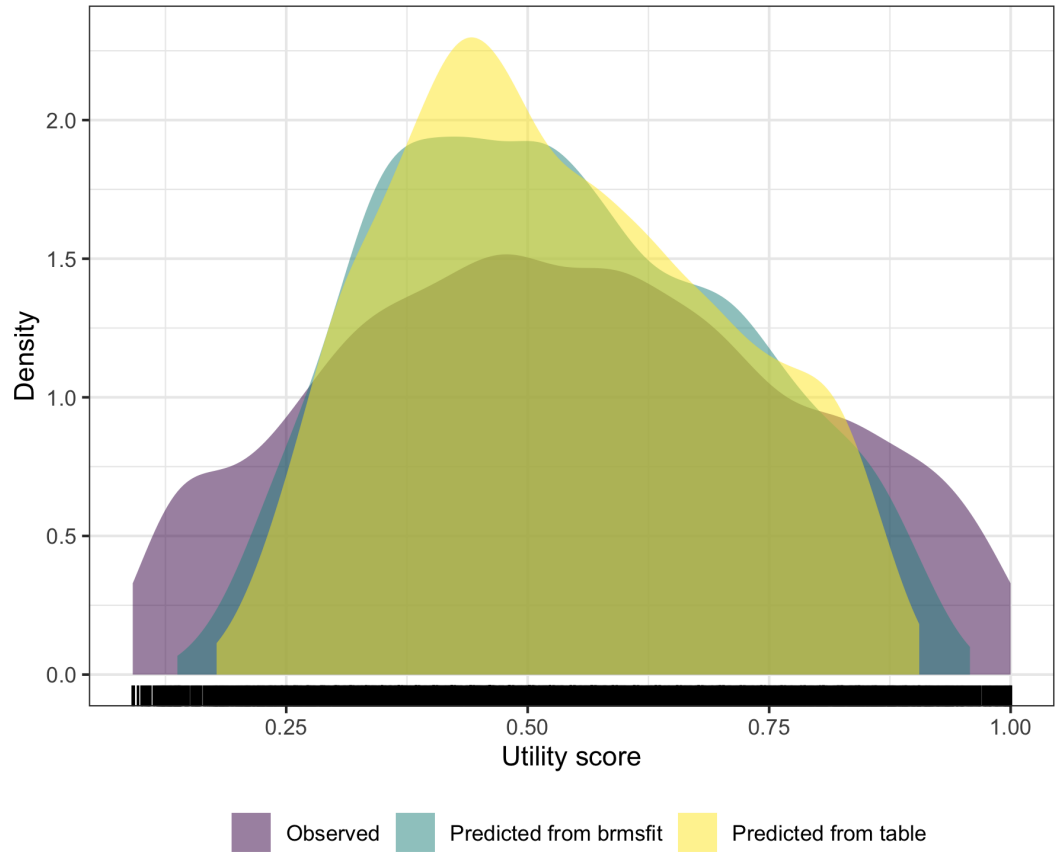


Figure 85: K10 with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

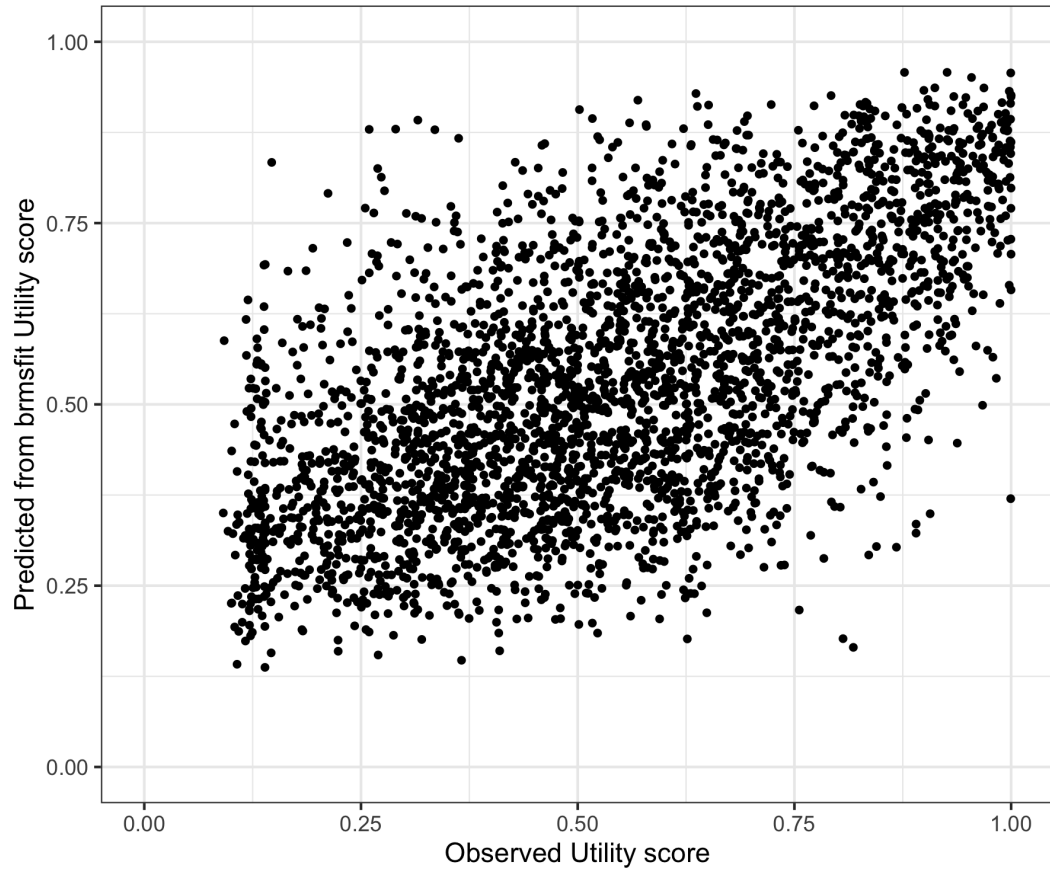


Figure 86: K10 with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

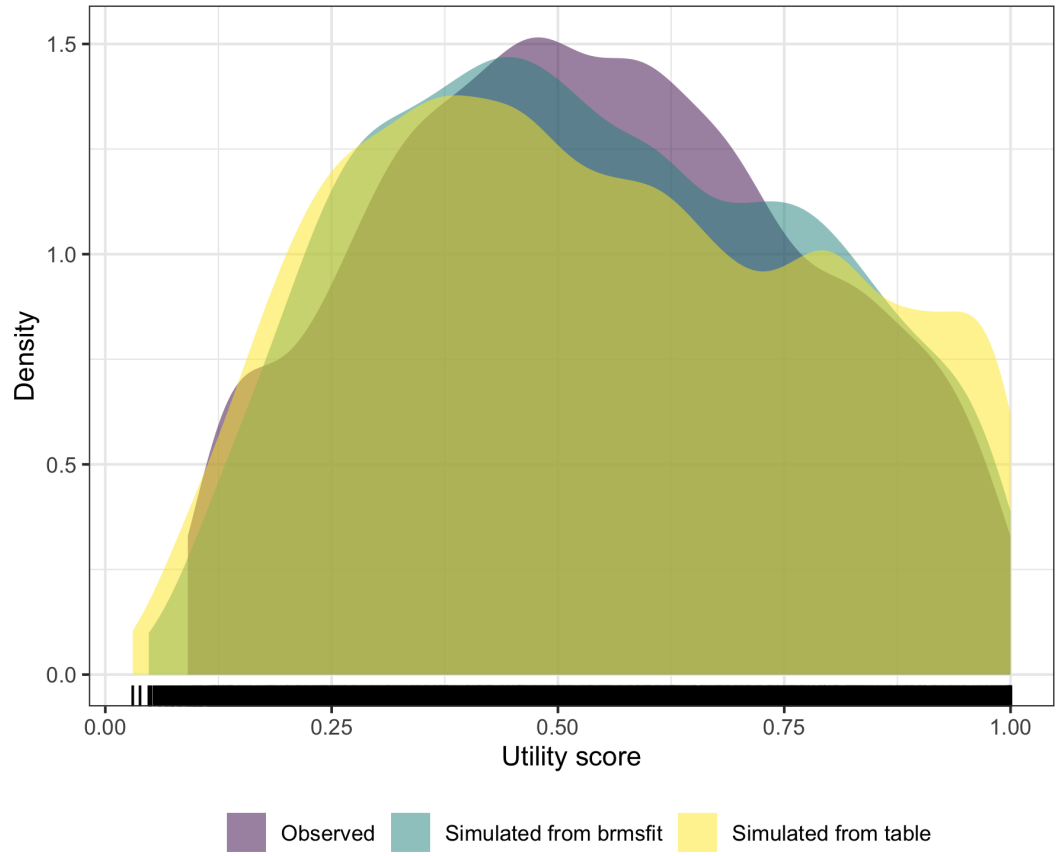


Figure 87: K10 with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

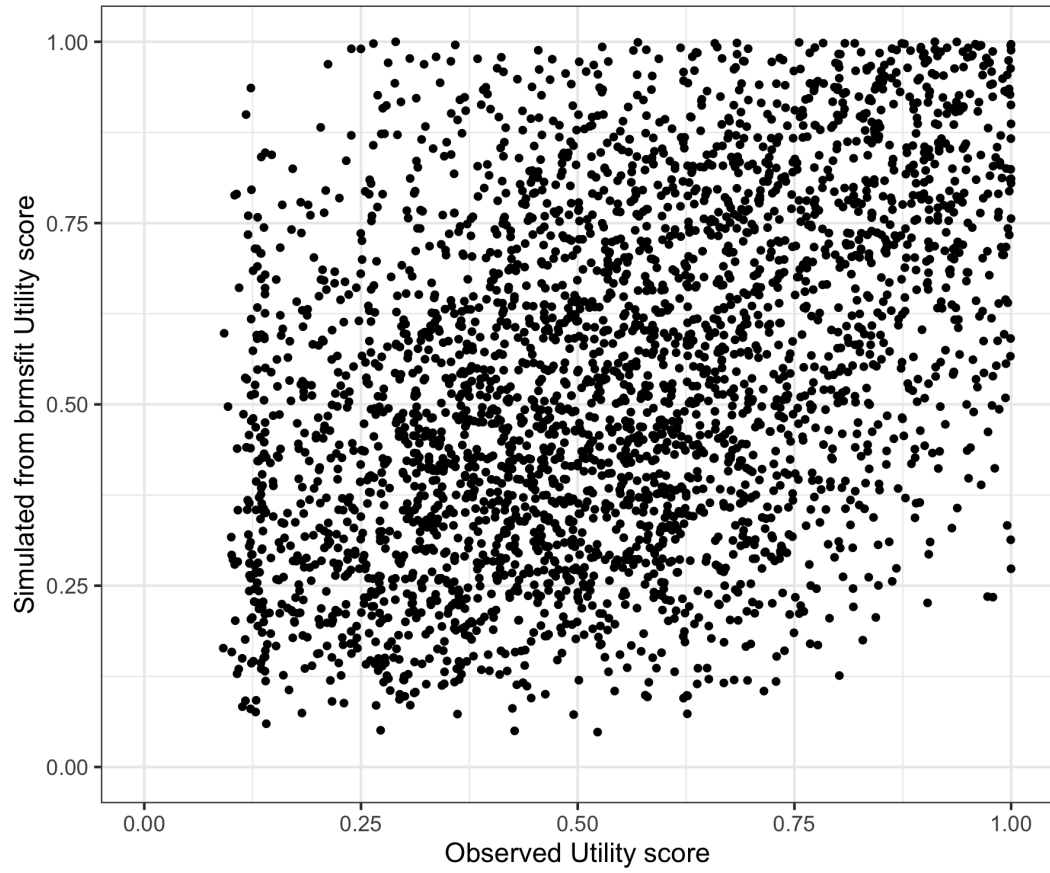


Figure 88: K10 with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

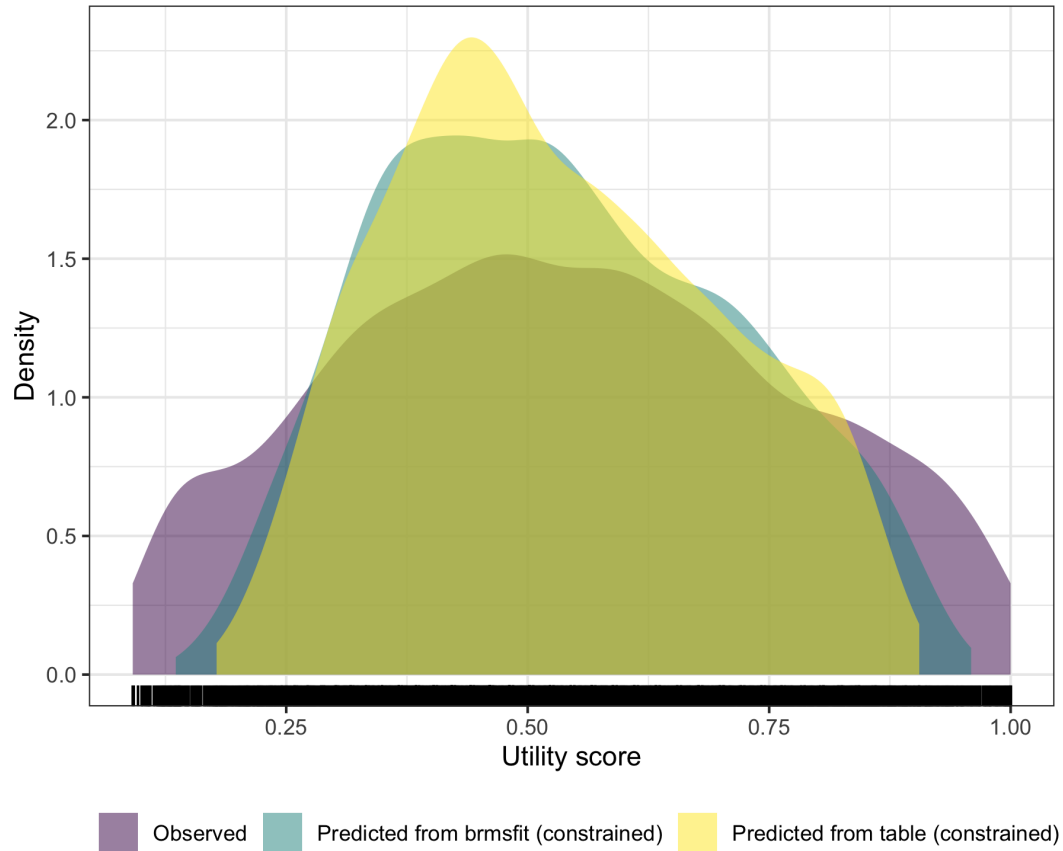


Figure 89: K10 with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

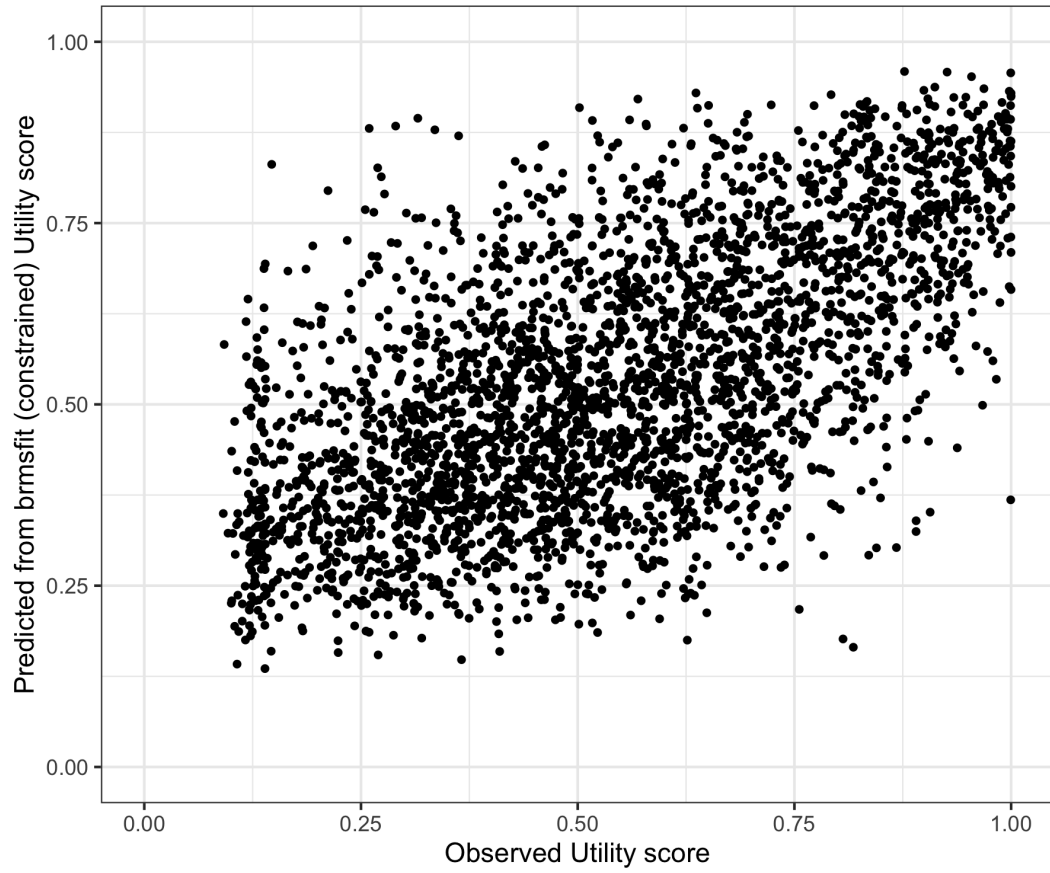


Figure 90: K10 with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

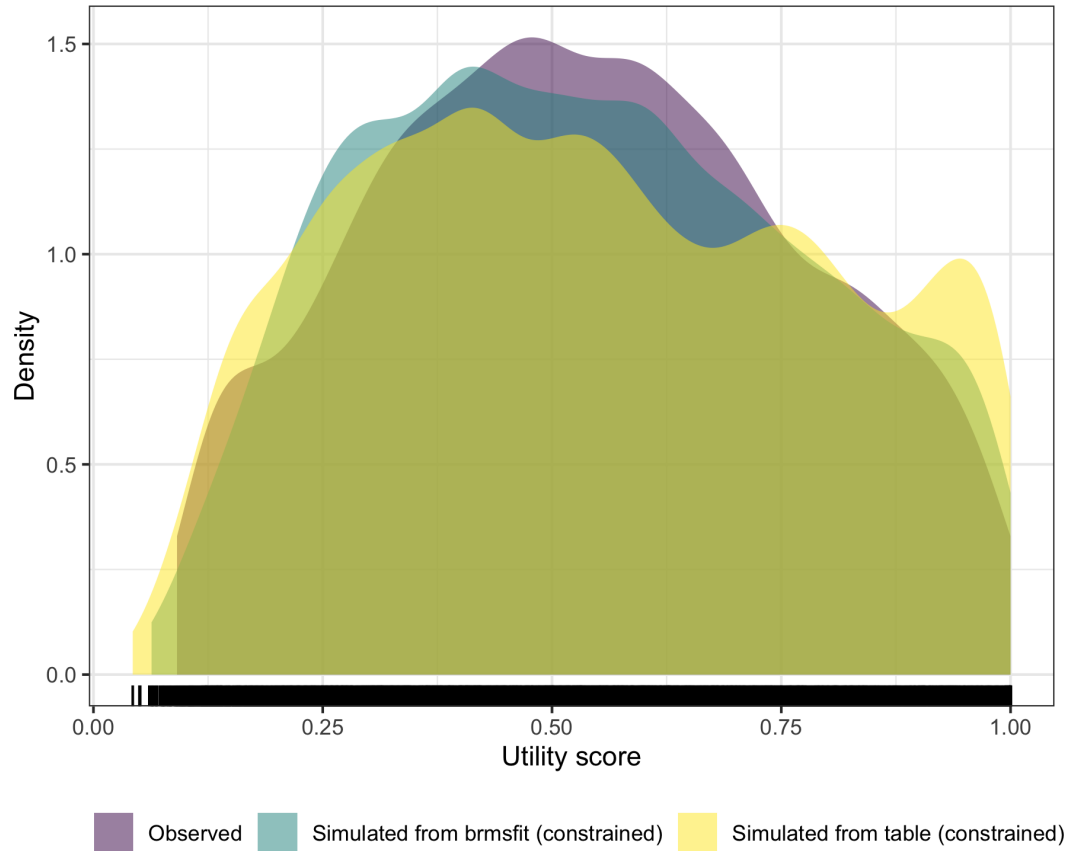


Figure 91: K10 with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

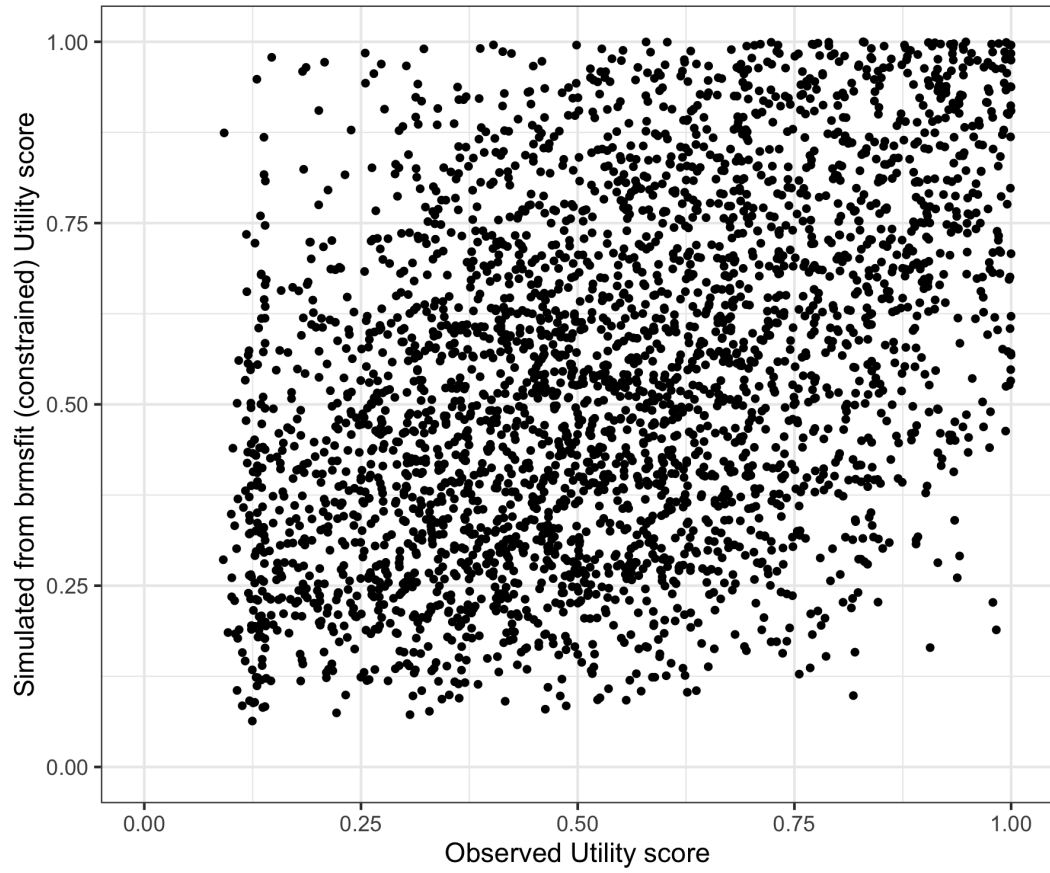


Figure 92: K10 with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

11 K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is K10_dstudyingworking_1_GLM_GSN_LOG.

Table 21: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3902)							
sd(Intercept)	0.04	0.02	0.00	0.08	1.00	363	923
Population-Level Effects:							
Intercept	0.24	0.02	0.20	0.28	1.00	8 630	6 347
K10_scaled	-3.29	0.06	-3.41	-3.17	1.00	9 516	5 869
dstudyingworkingBoth	0.06	0.02	0.04	0.10	1.00	6 222	5 917
dstudyingworkingStudy	0.04	0.01	0.02	0.07	1.00	6 562	6 307
dstudyingworkingWork	0.04	0.02	0.01	0.07	1.00	6 935	6 279
Family Specific Parameters:							
sigma	0.17	0.00	0.17	0.18	1.00	852	1 415

Formula: AQOL6D ~K10_scaled + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 22: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.44	0.01	0.417 , 0.471
RMSE	0.24	0.00	0.239 , 0.244

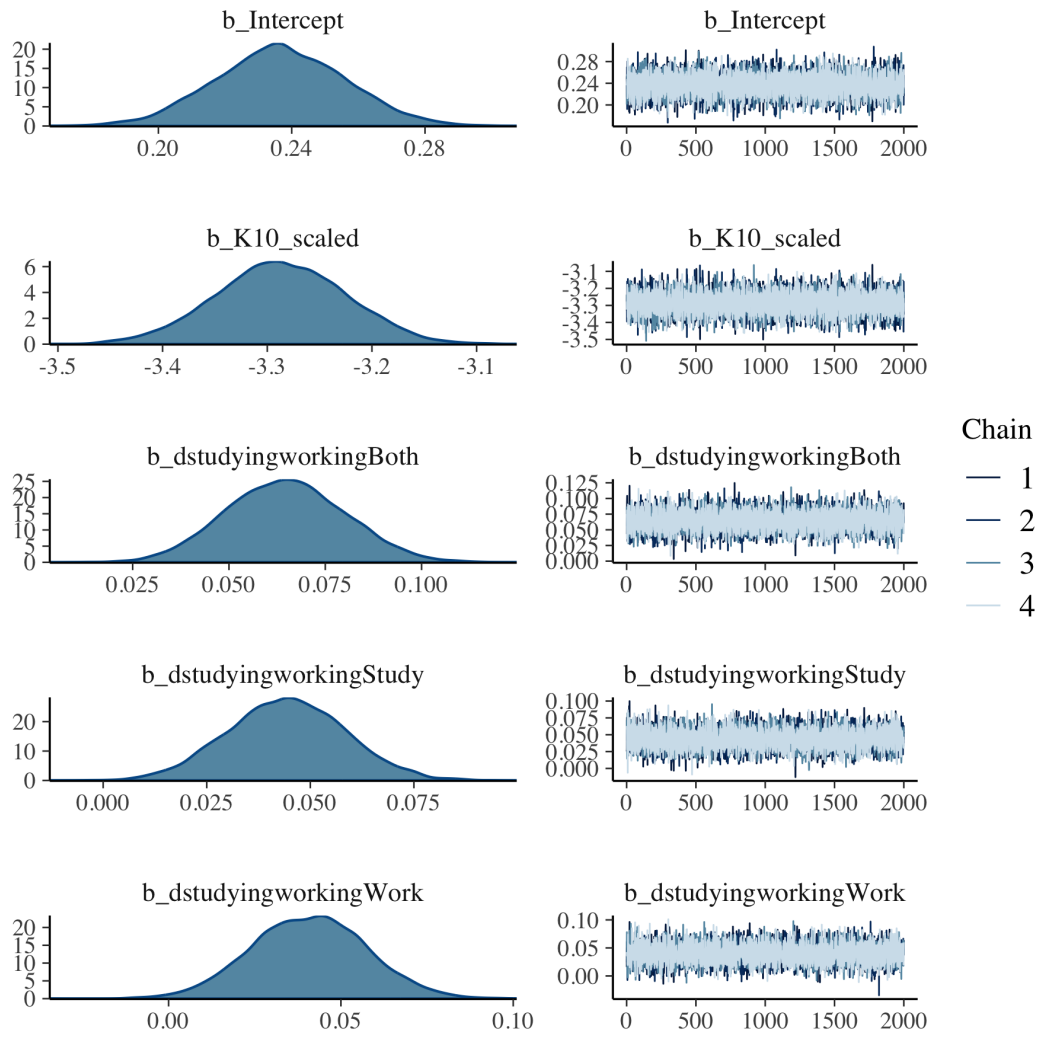


Figure 93: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link population level effects

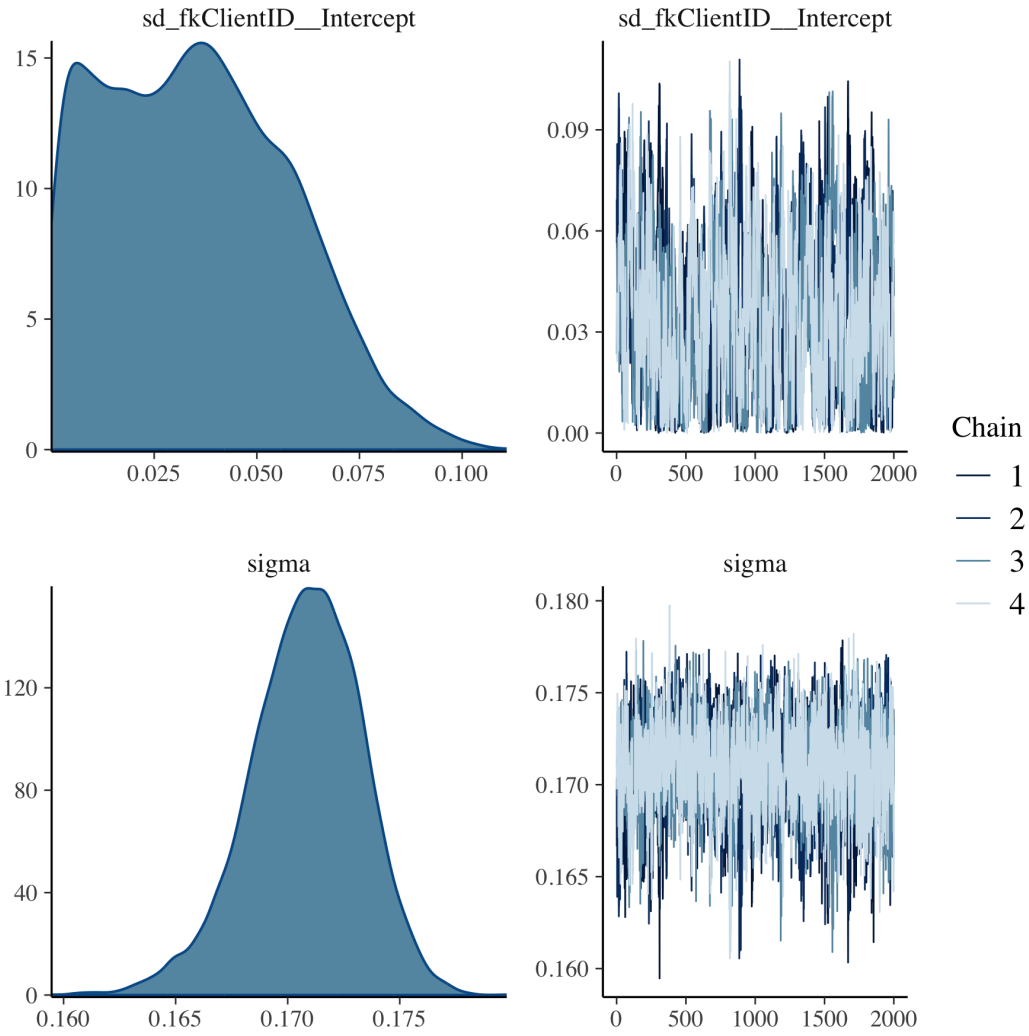


Figure 94: K10 with `dstudyingworking` generalised linear mixed model with Gaussian distribution and log link group level effects

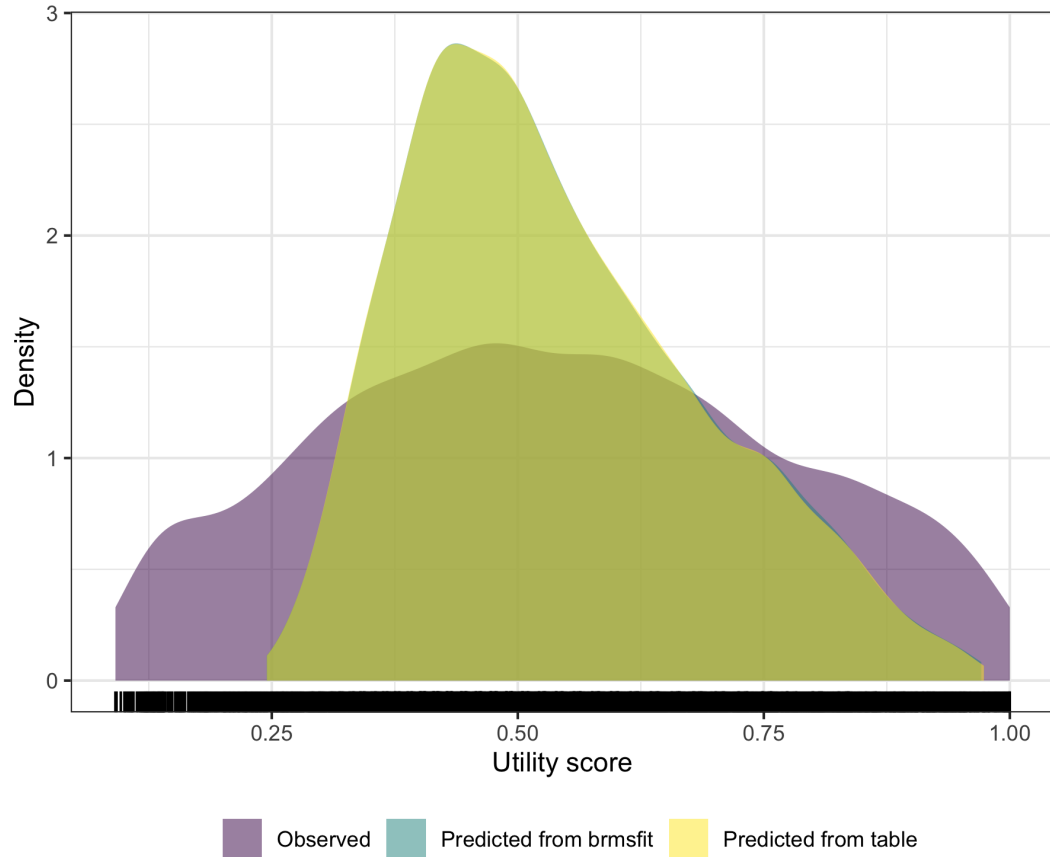


Figure 95: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

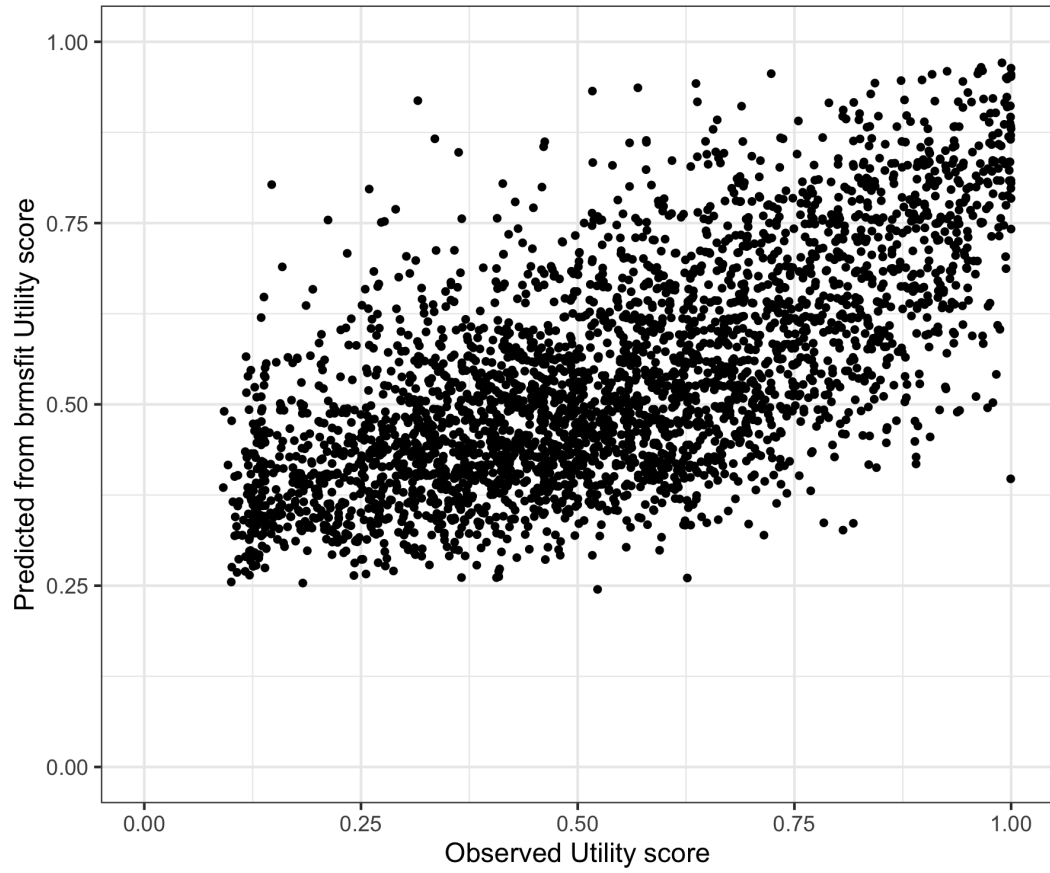


Figure 96: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

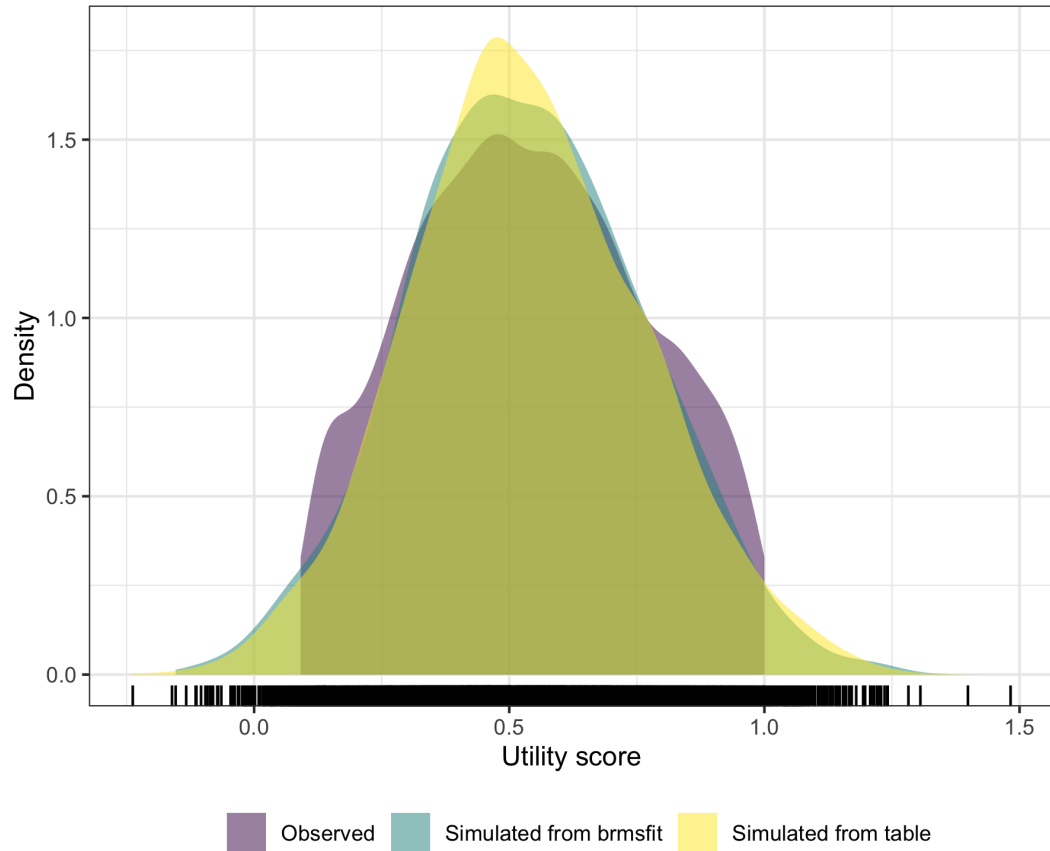


Figure 97: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

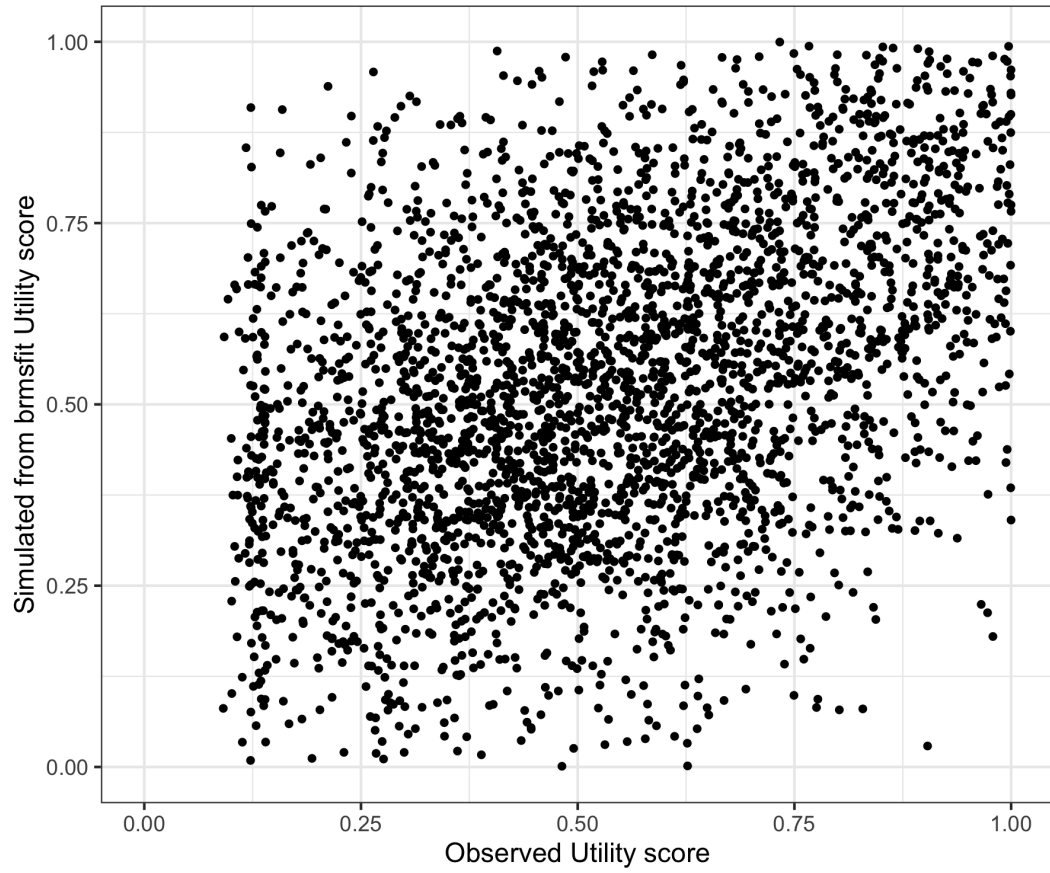


Figure 98: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

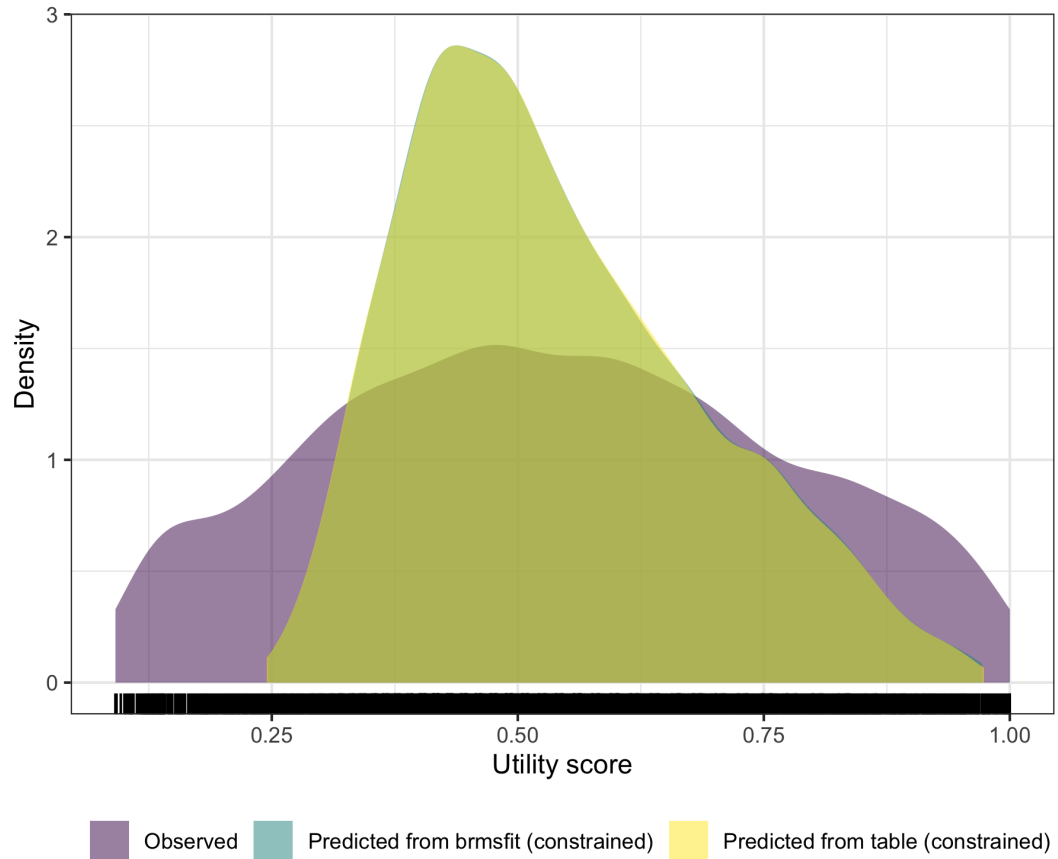


Figure 99: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

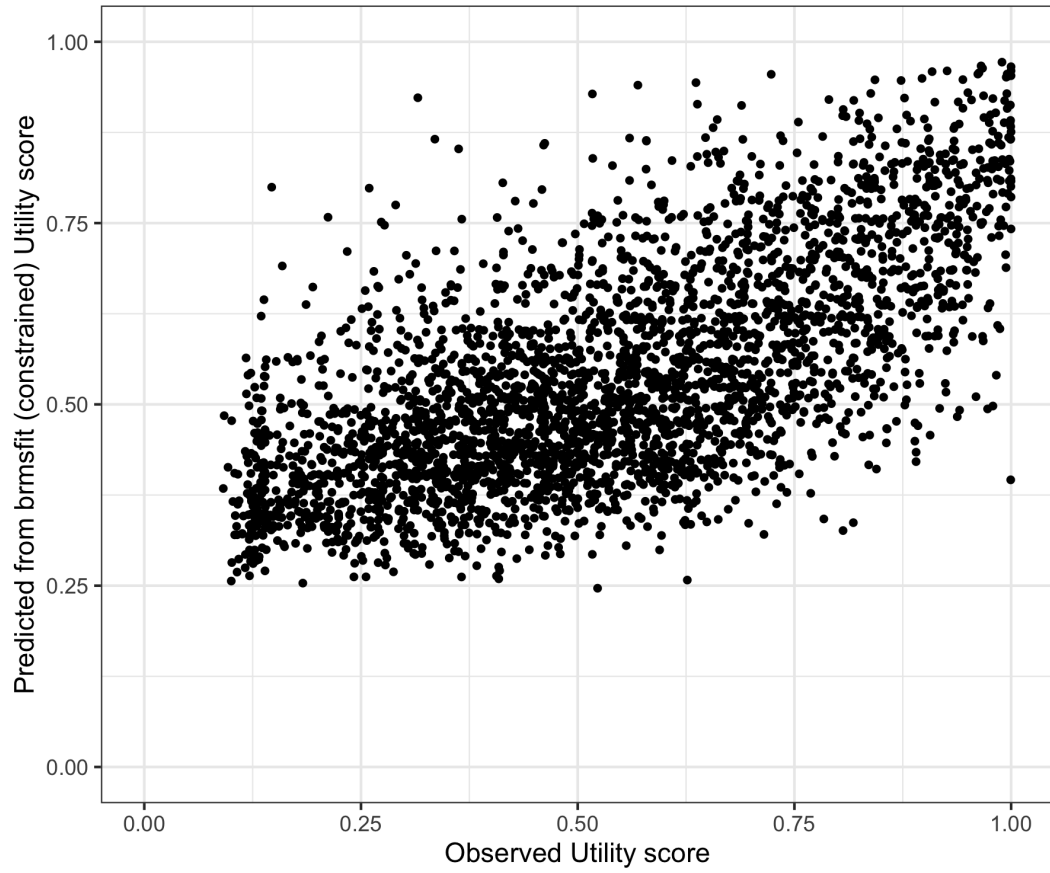


Figure 100: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

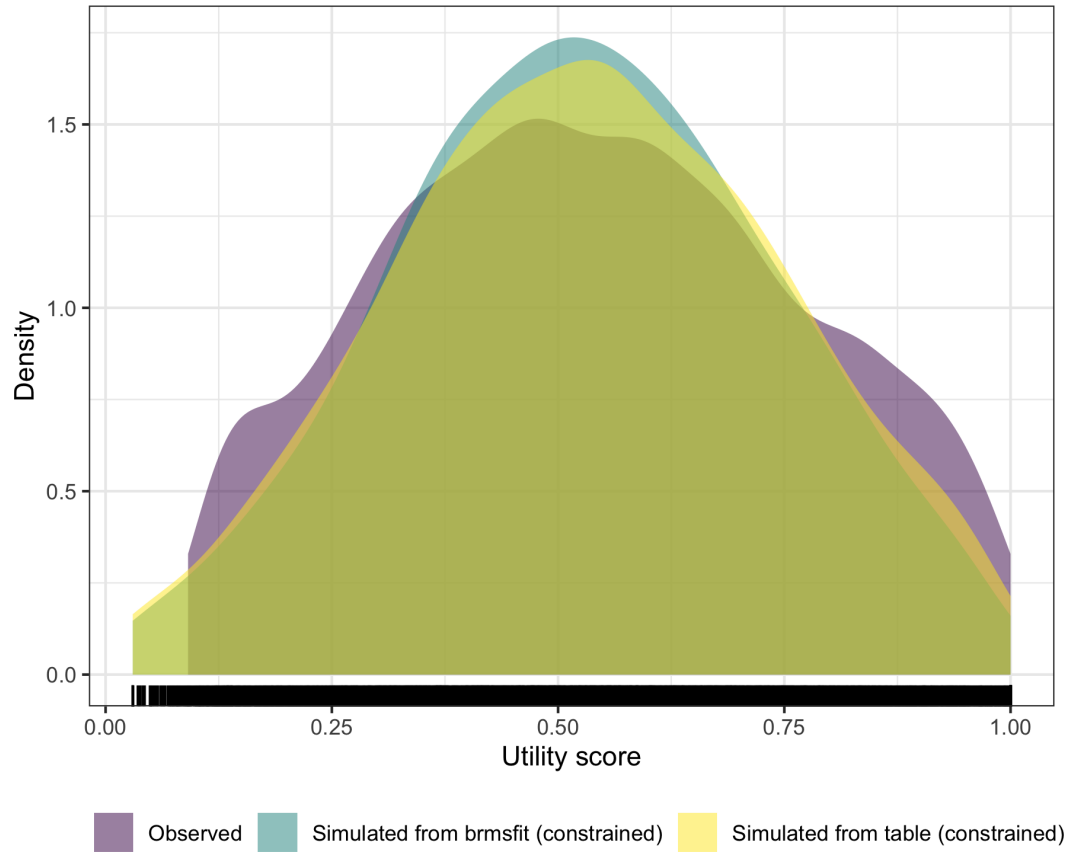


Figure 101: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

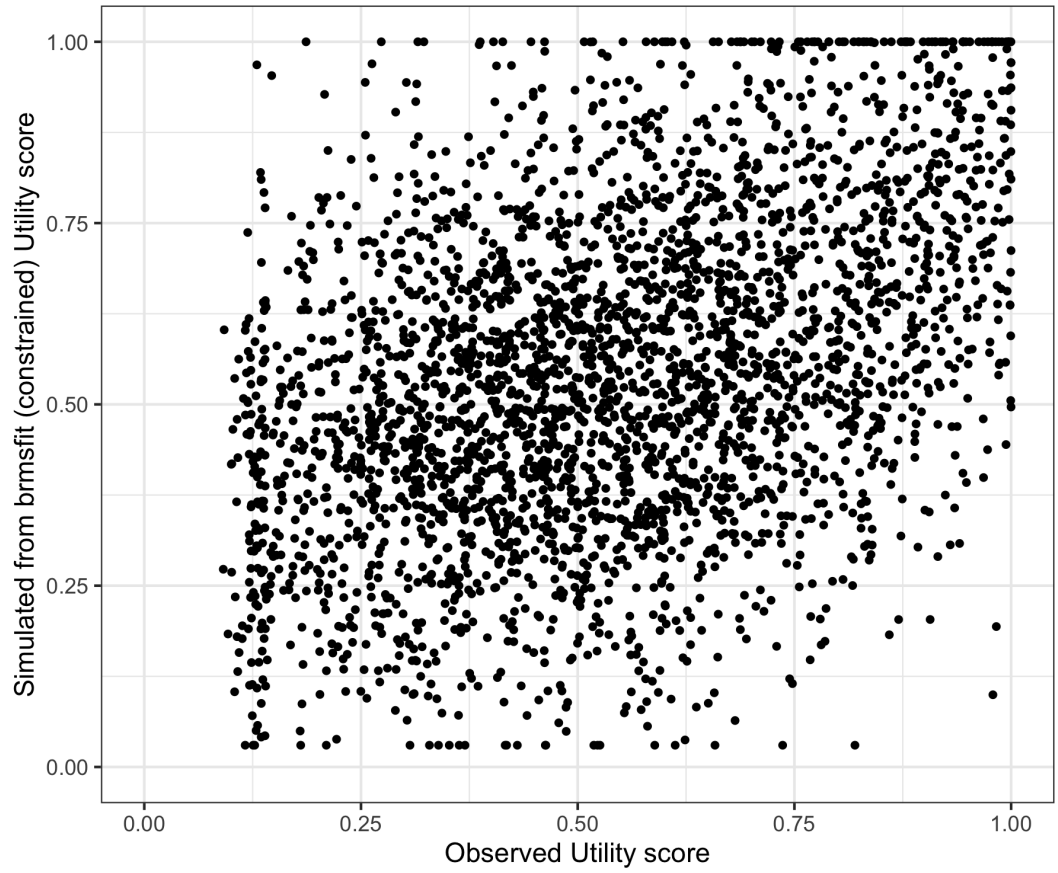


Figure 102: K10 with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

12 K10 with dstudyingworking linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is K10_dstudyingworking_1_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 23: K10 with dstudyingworking linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3902)							
sd(Intercept)	0.43	0.16	0.03	0.59	2.11	5	14
Population-Level Effects:							
Intercept	1.35	0.04	1.27	1.43	1.00	1 911	3 477
K10_scaled	-6.11	0.11	-6.34	-5.89	1.00	2 476	2 990
dstudyingworkingBoth	0.14	0.03	0.09	0.20	1.00	2 422	4 291
dstudyingworkingStudy	0.09	0.03	0.04	0.14	1.00	1 847	3 079
dstudyingworkingWork	0.09	0.03	0.03	0.15	1.00	2 044	3 940
Family Specific Parameters:							
sigma	0.37	0.14	0.15	0.60	2.10	5	13

Formula: AQOL6D_CLL ~K10_scaled + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 24: K10 with dstudyingworking linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.75	0.17	0.422 , 0.964
RMSE	1.06	0.03	1.032 , 1.075

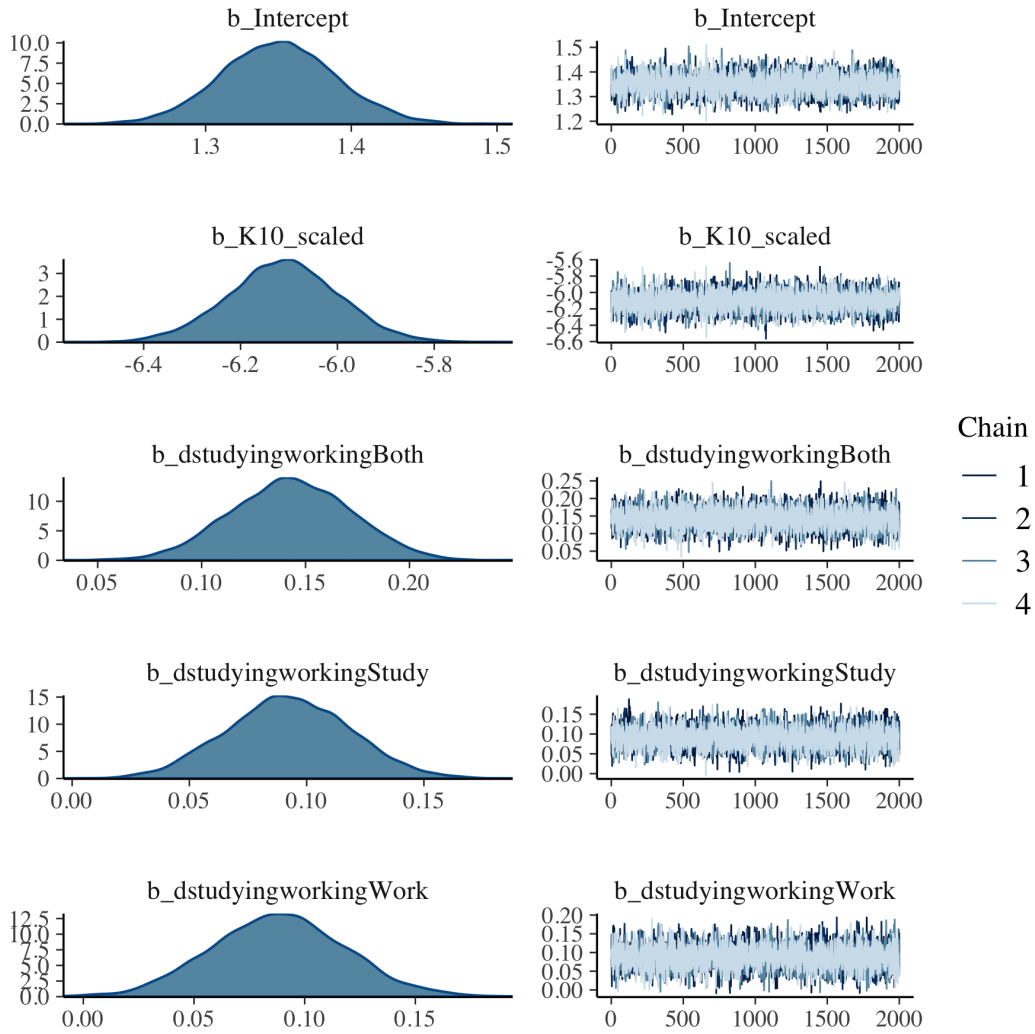


Figure 103: K10 with dstudyingworking linear mixed model with complementary log log transformation population level effects

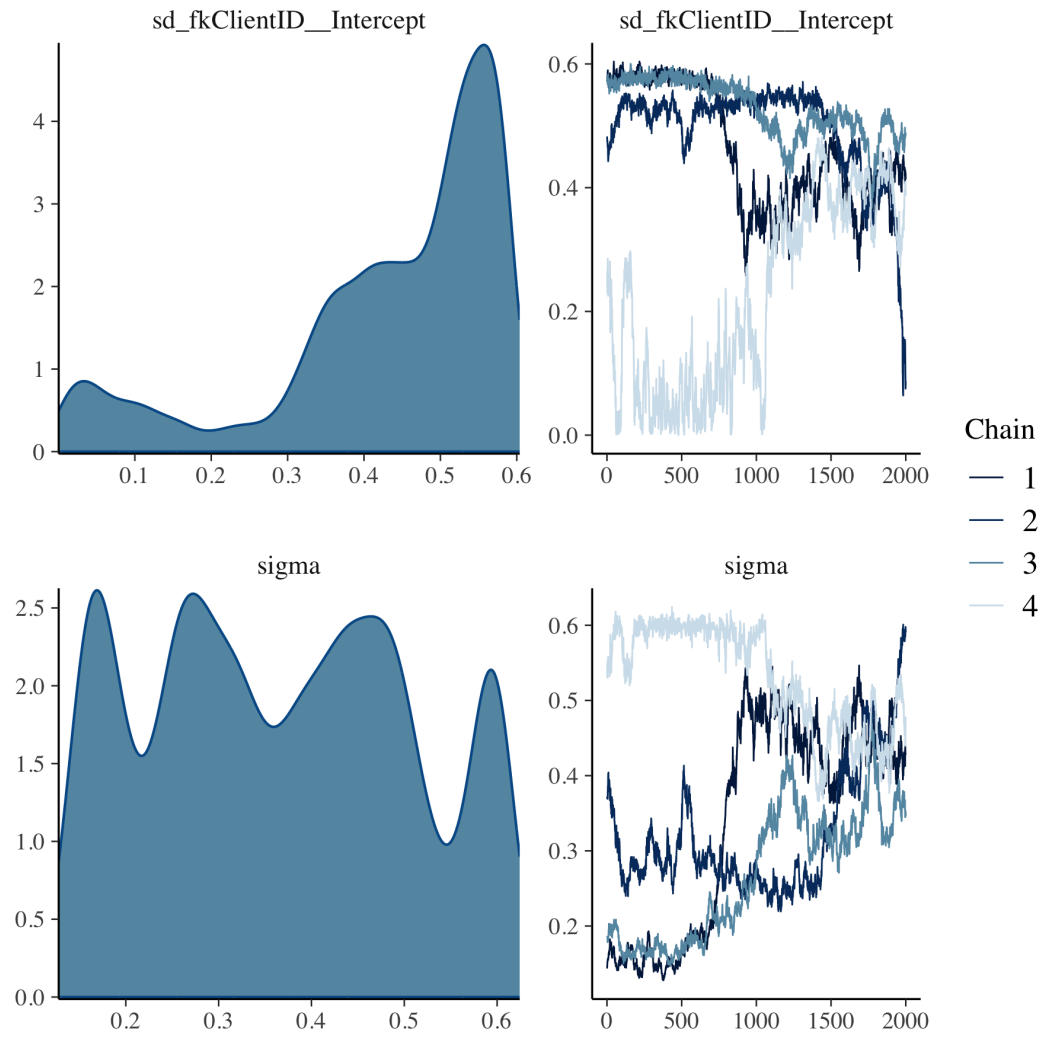


Figure 104: K10 with `dstudyingworking` linear mixed model with complementary log log transformation group level effects

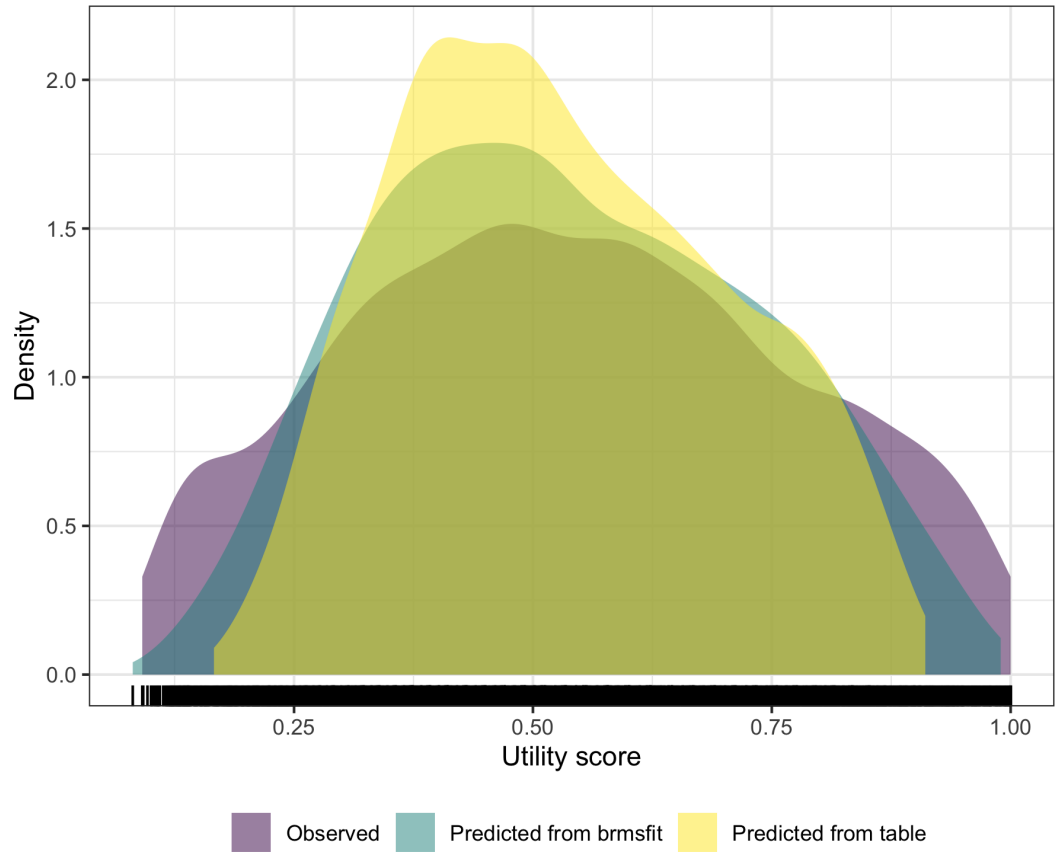


Figure 105: K10 with dstudyingworking linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

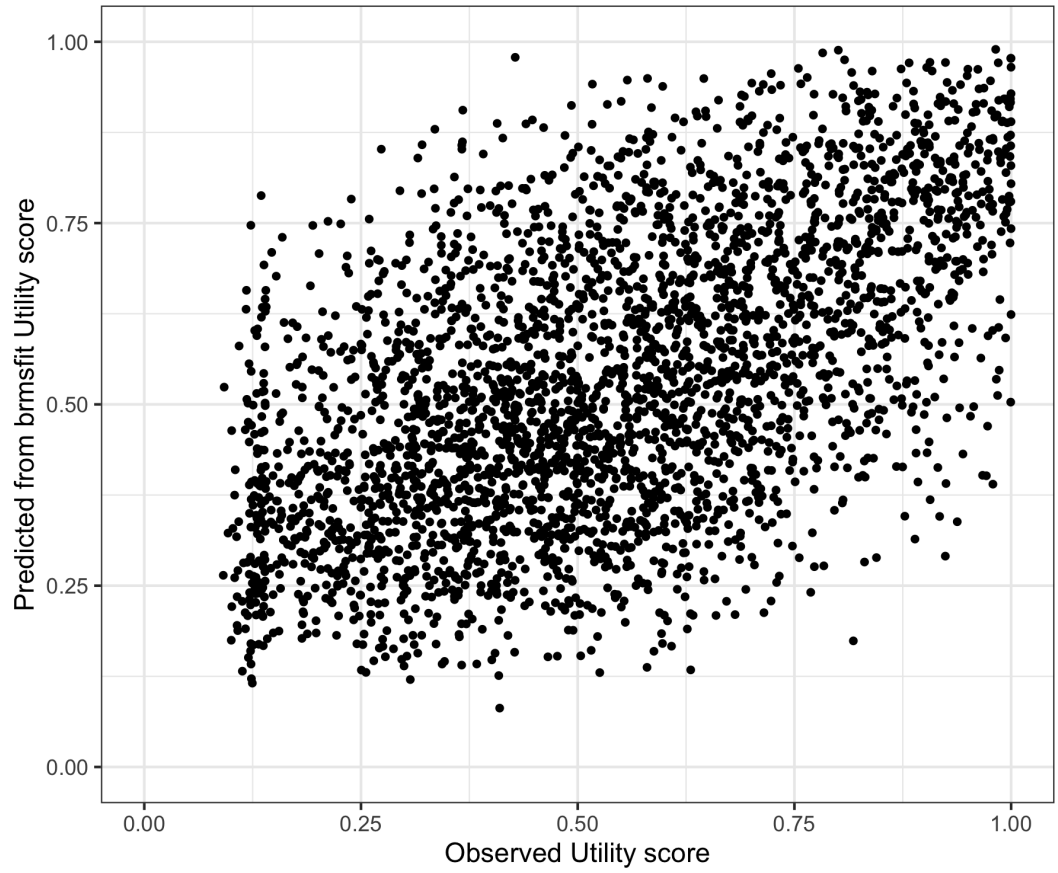


Figure 106: K10 with dstudyingworking linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

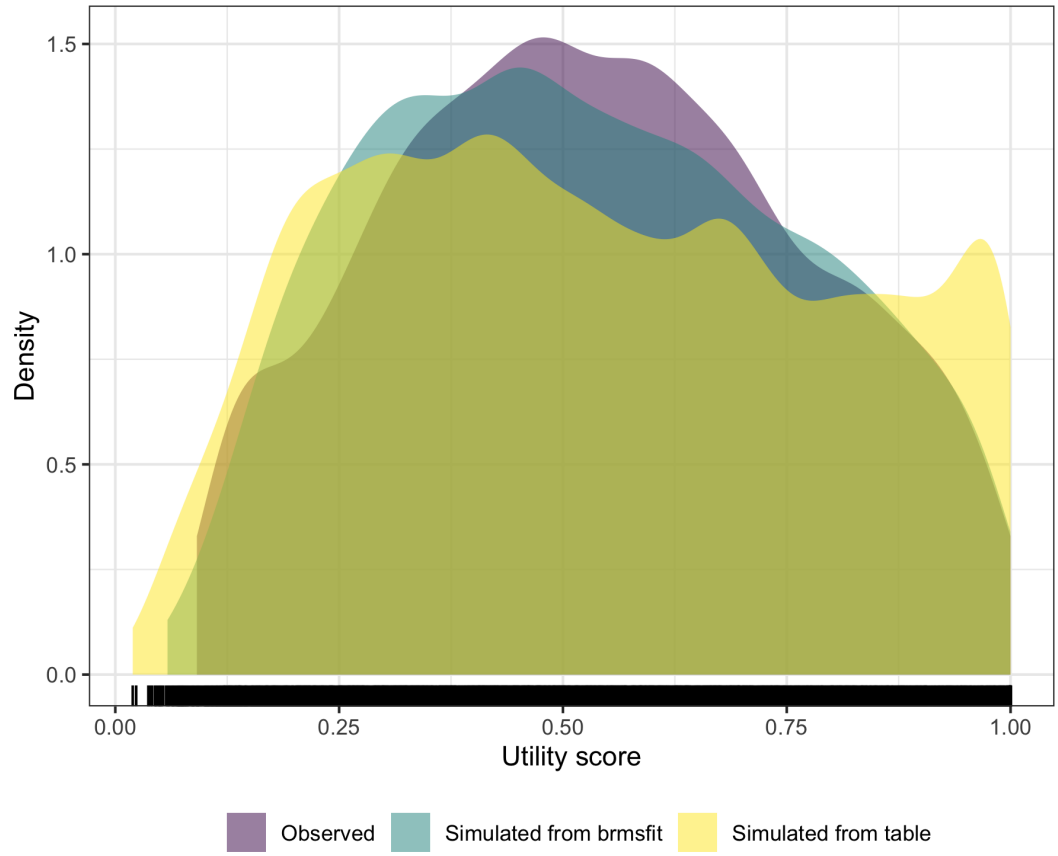


Figure 107: K10 with dstudyingworking linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

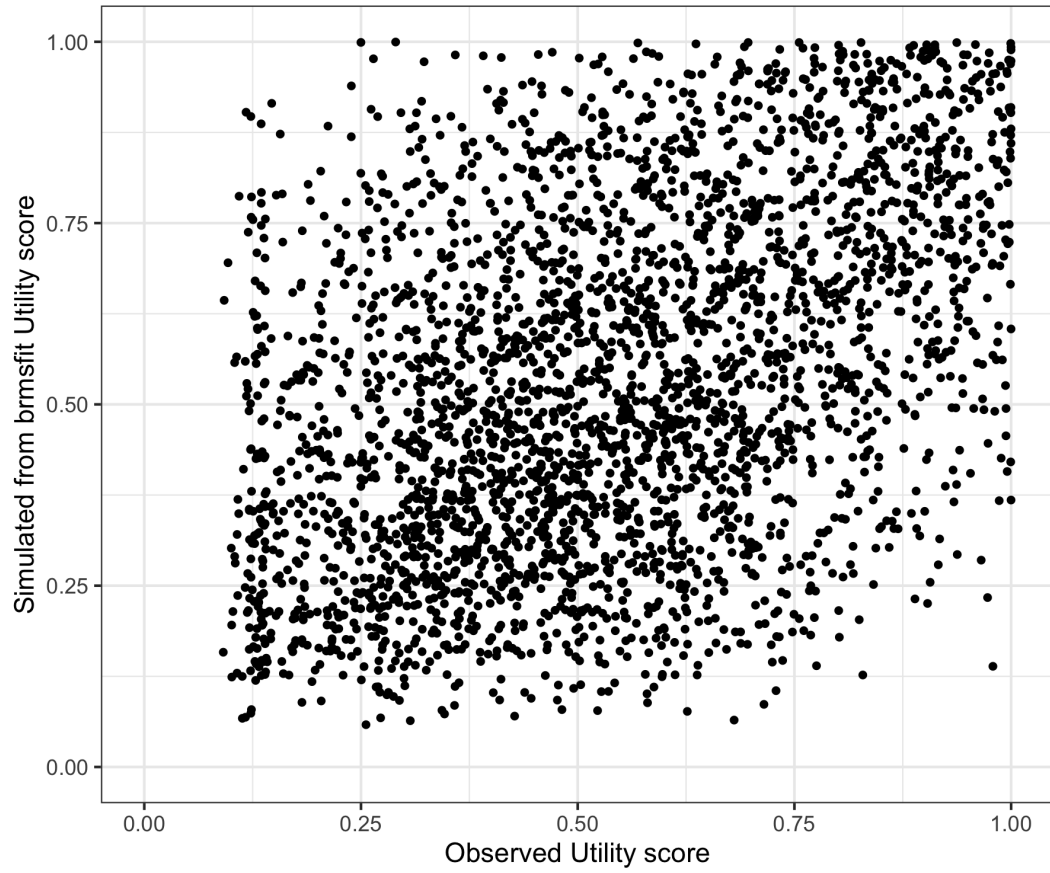


Figure 108: K10 with dstudyingworking linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

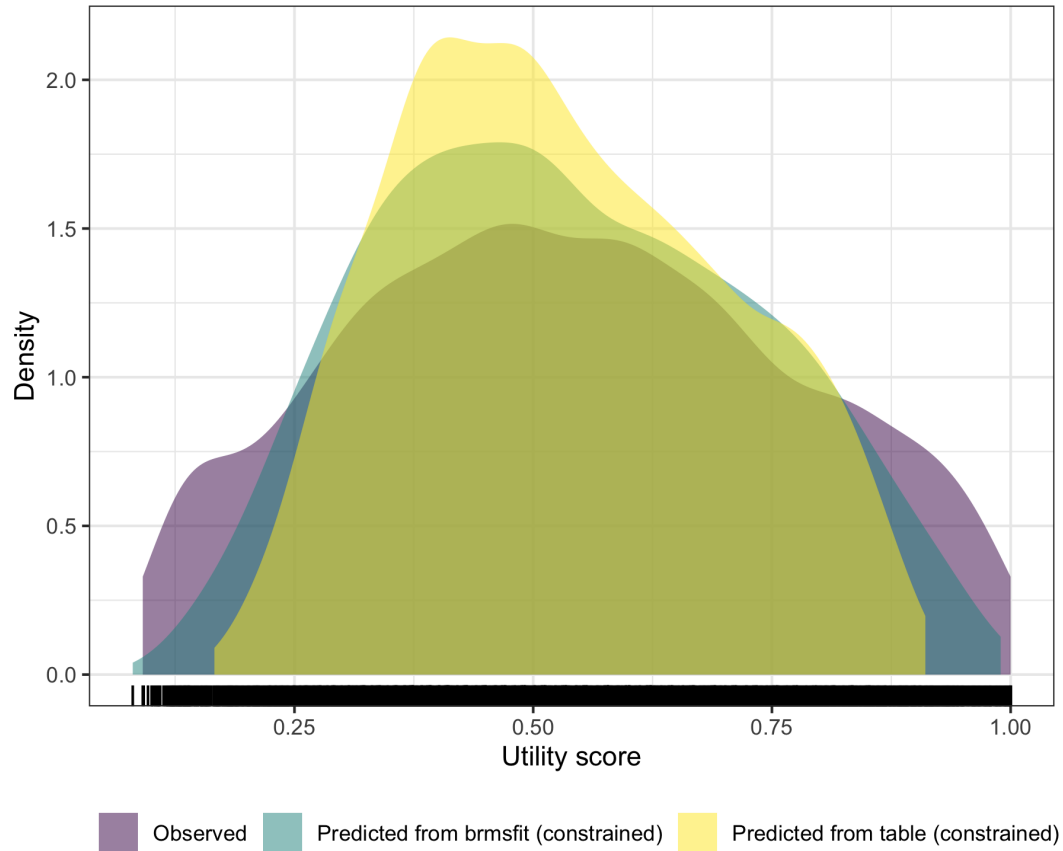


Figure 109: K10 with dstudyingworking linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

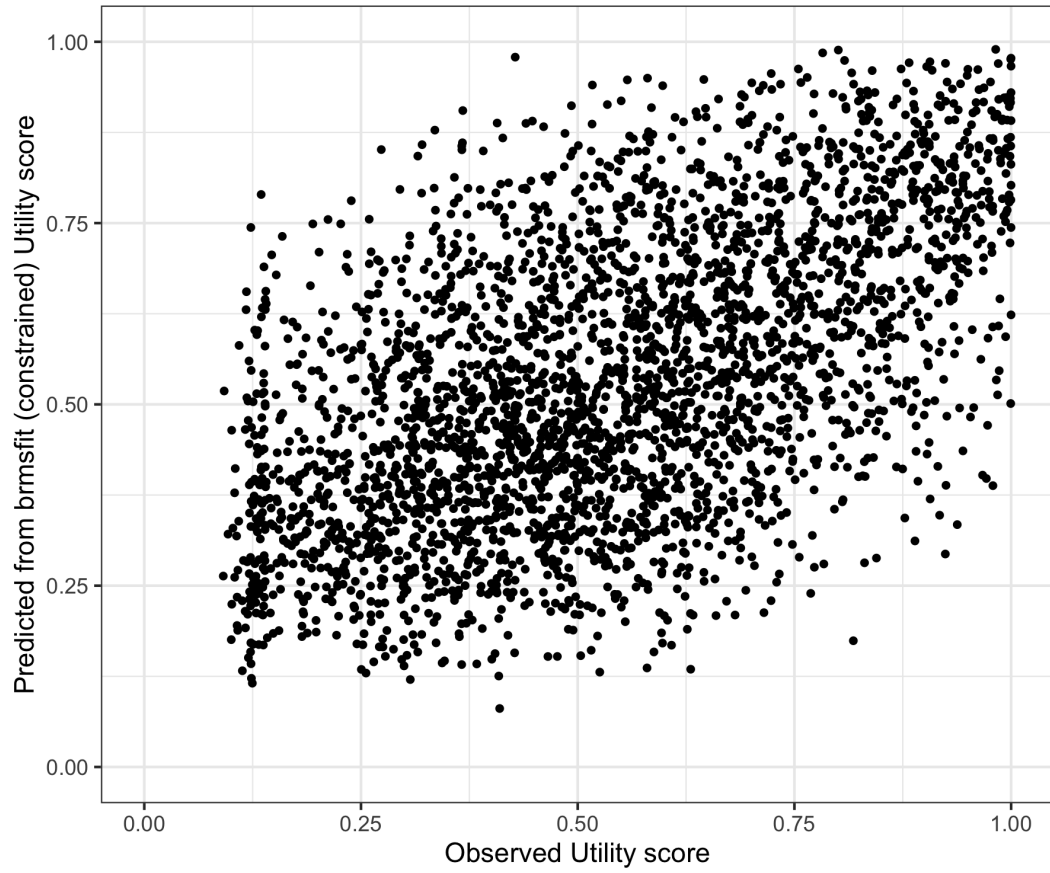


Figure 110: K10 with dstudyingworking linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

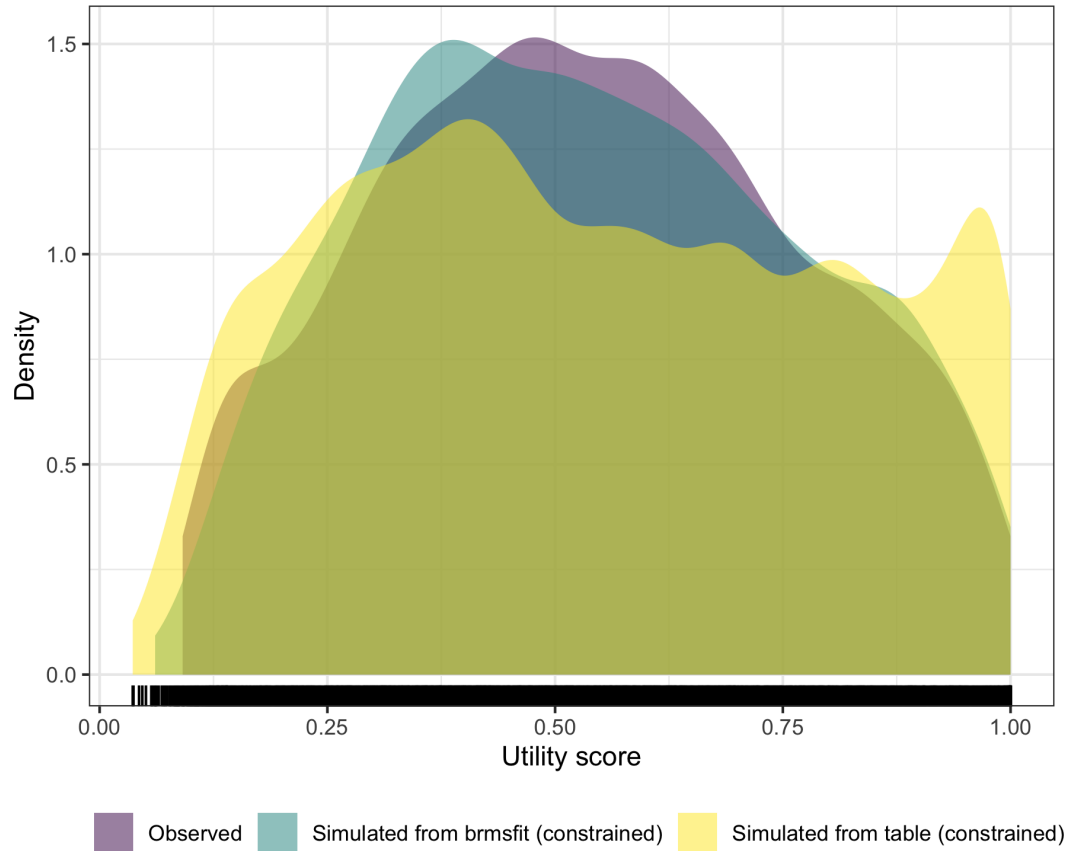


Figure 111: K10 with dstudyingworking linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

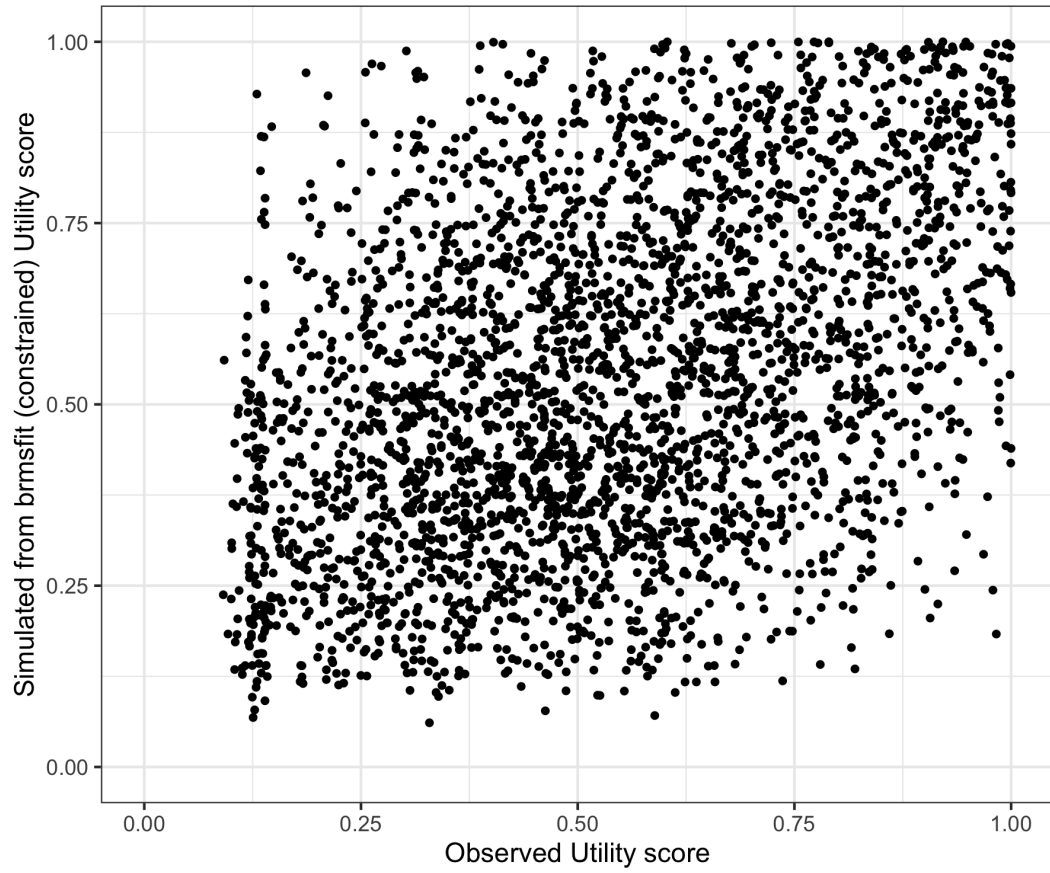


Figure 112: K10 with dstudyingworking linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

13 K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - cdaysoor (days out of role); and - dage (age). The catalogue reference for this model is K10_cdaysoor_2_GLM_GSN_LOG.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Table 25: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3992)							
sd(Intercept)	0.47	0.58	0.00	1.58	3.72	5	11
Population-Level Effects:							
Intercept	5.27	6.93	0.33	17.31	2.20	5	19
K10_scaled	-2.00	1.01	-3.09	-0.68	3.00	5	16
cdaysoor	0.00	0.02	-0.01	0.07	2.14	5	11
dage	-0.25	0.38	-0.89	-0.00	2.31	5	10
Family Specific Parameters:							
sigma	1.30	1.72	0.16	4.39	3.26	5	11

Formula: AQOL6D ~K10_scaled + cdaysoor + dage + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 26: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.48	0.03	0.435 , 0.501
RMSE	74.12	187.08	0.239 , 169.42

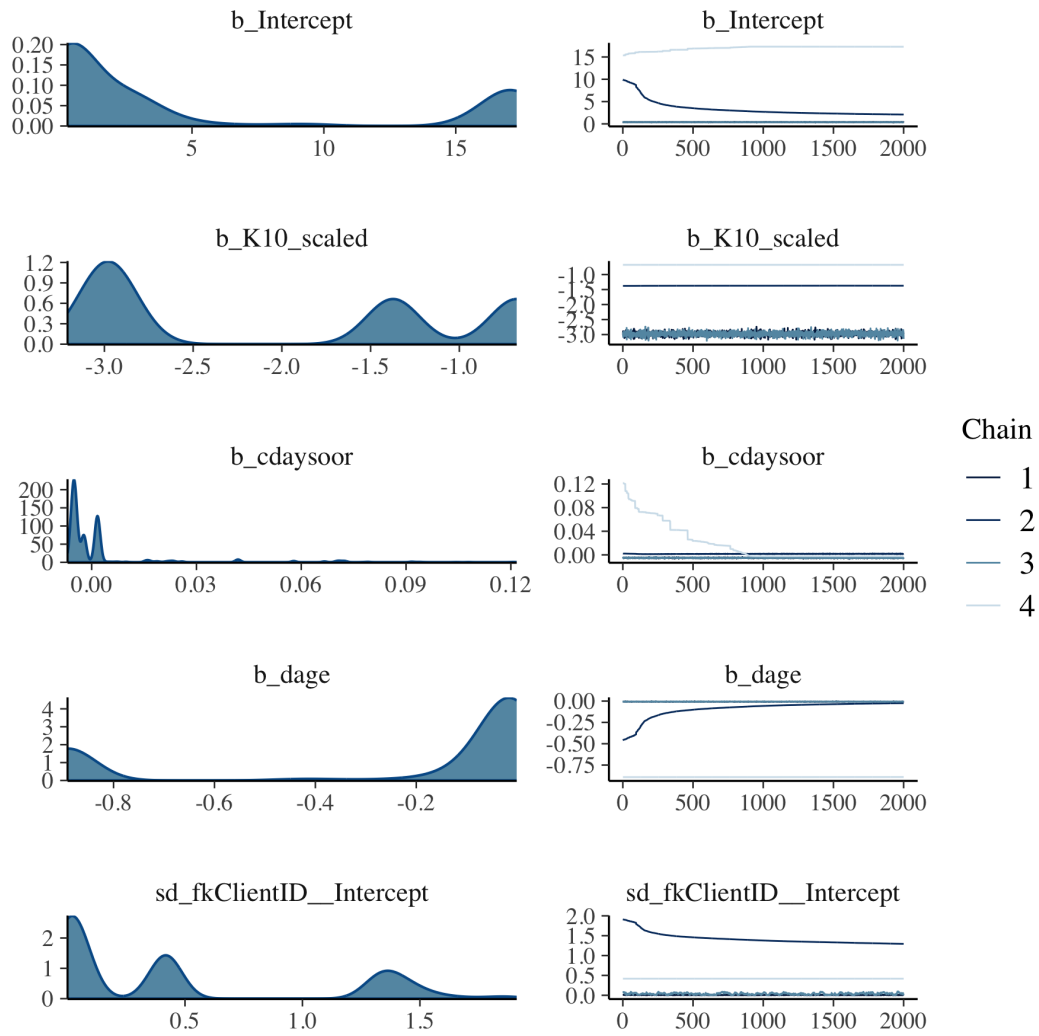


Figure 113: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link population level effects

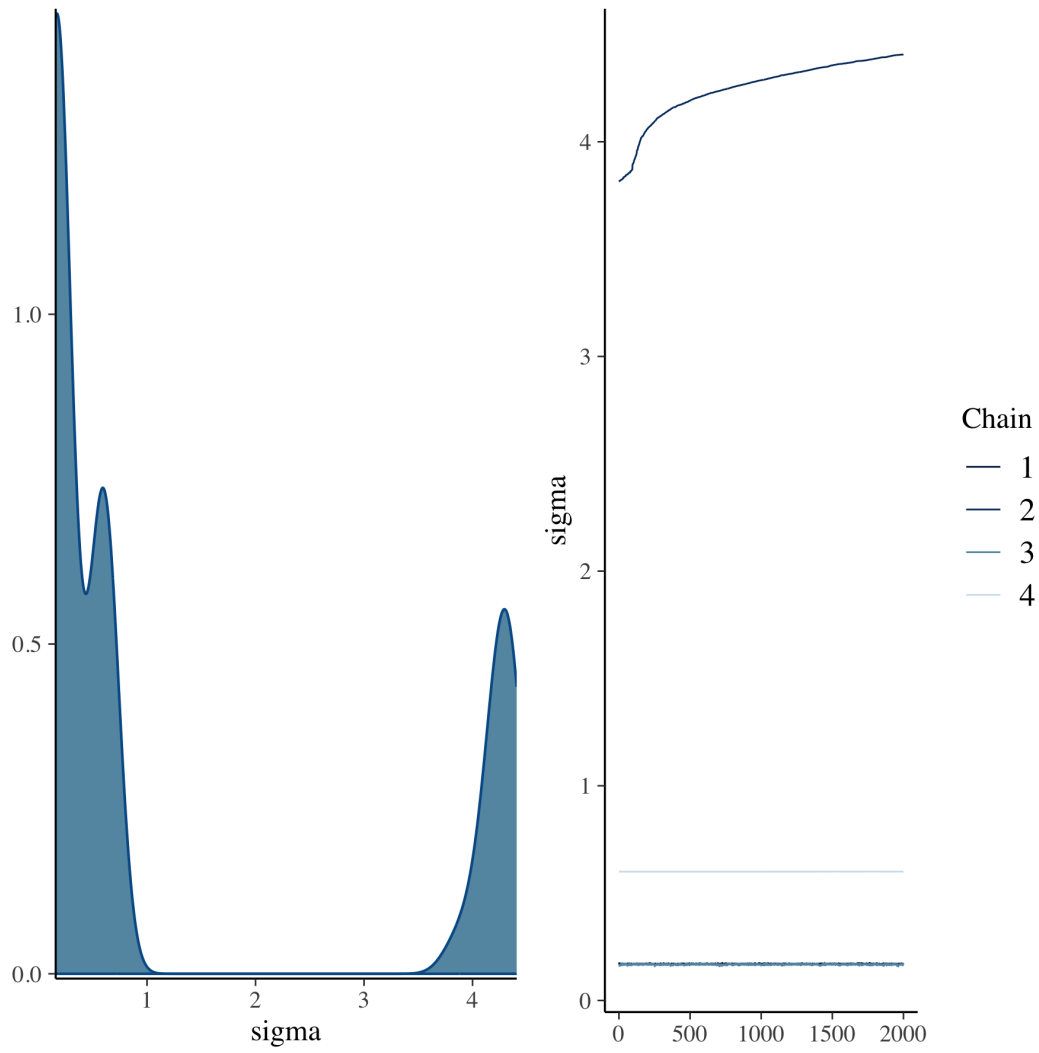


Figure 114: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link group level effects

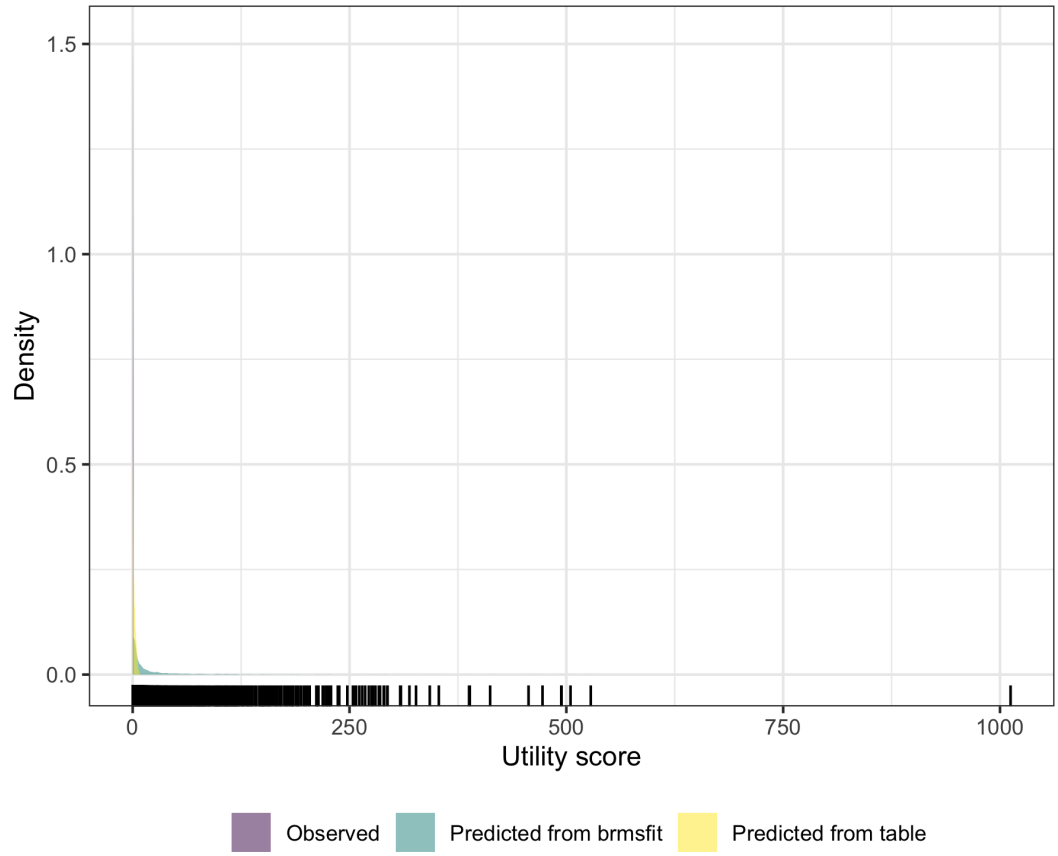


Figure 115: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

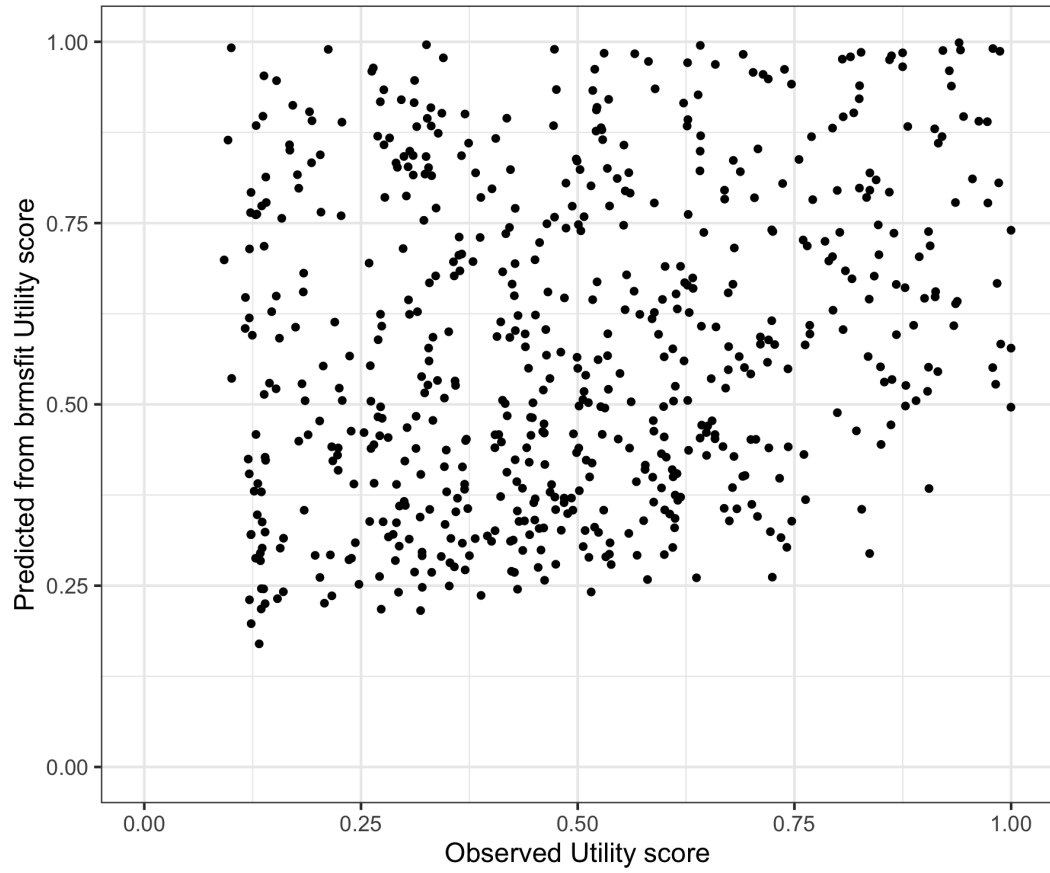


Figure 116: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

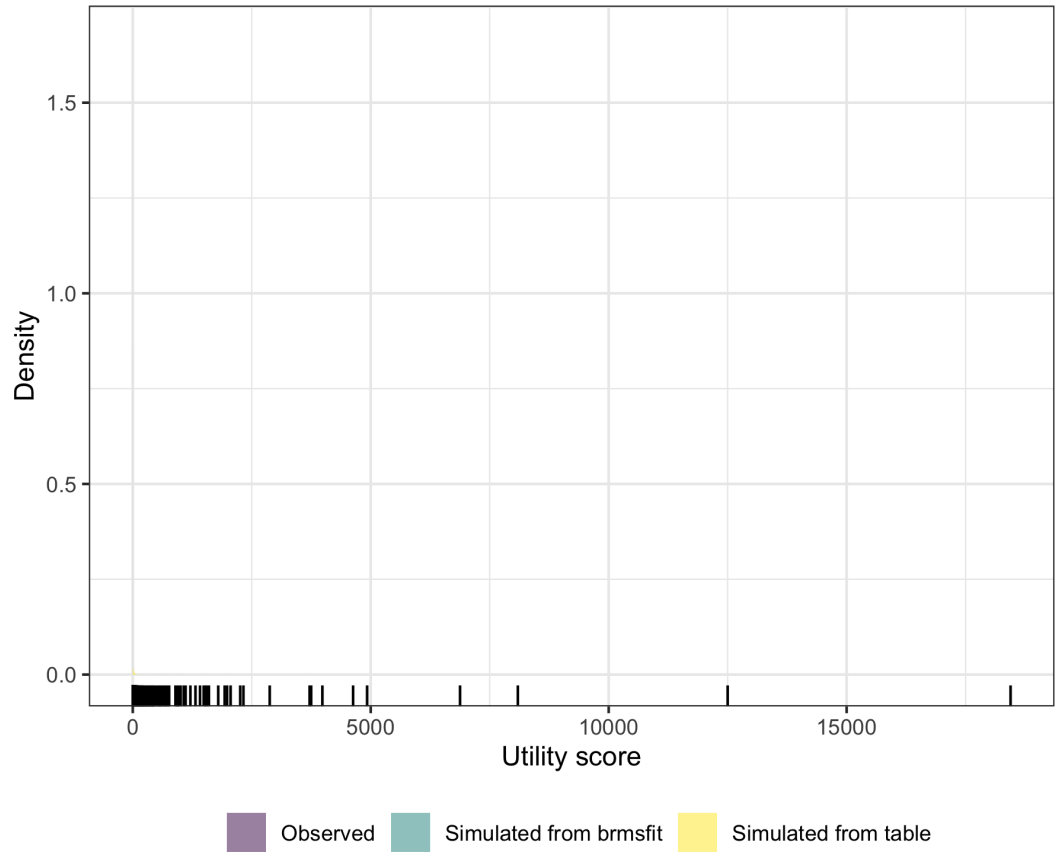


Figure 117: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

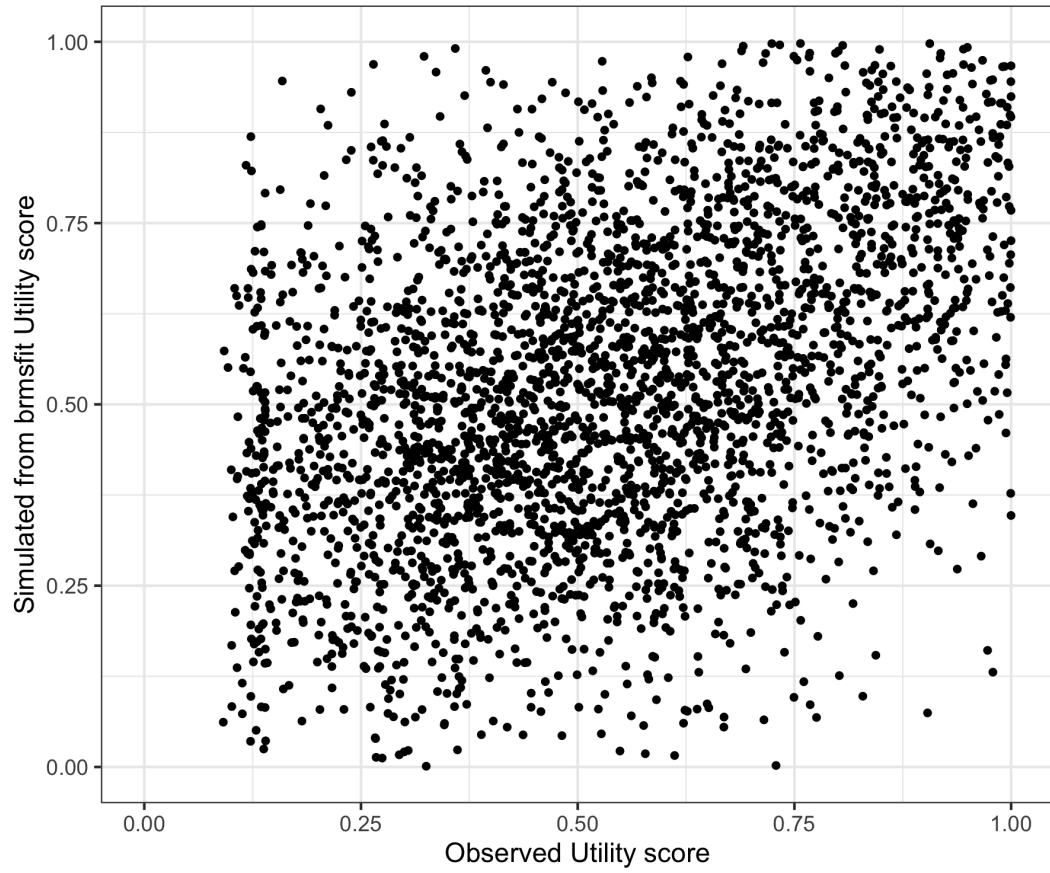


Figure 118: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

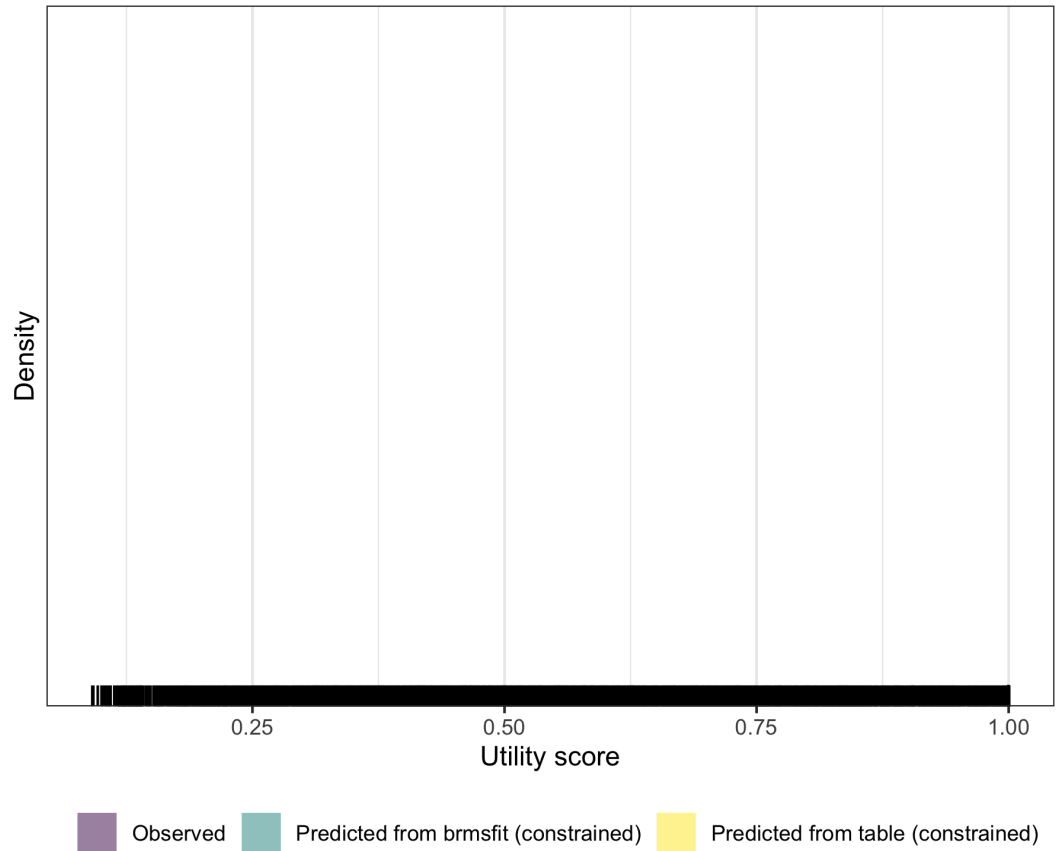


Figure 119: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

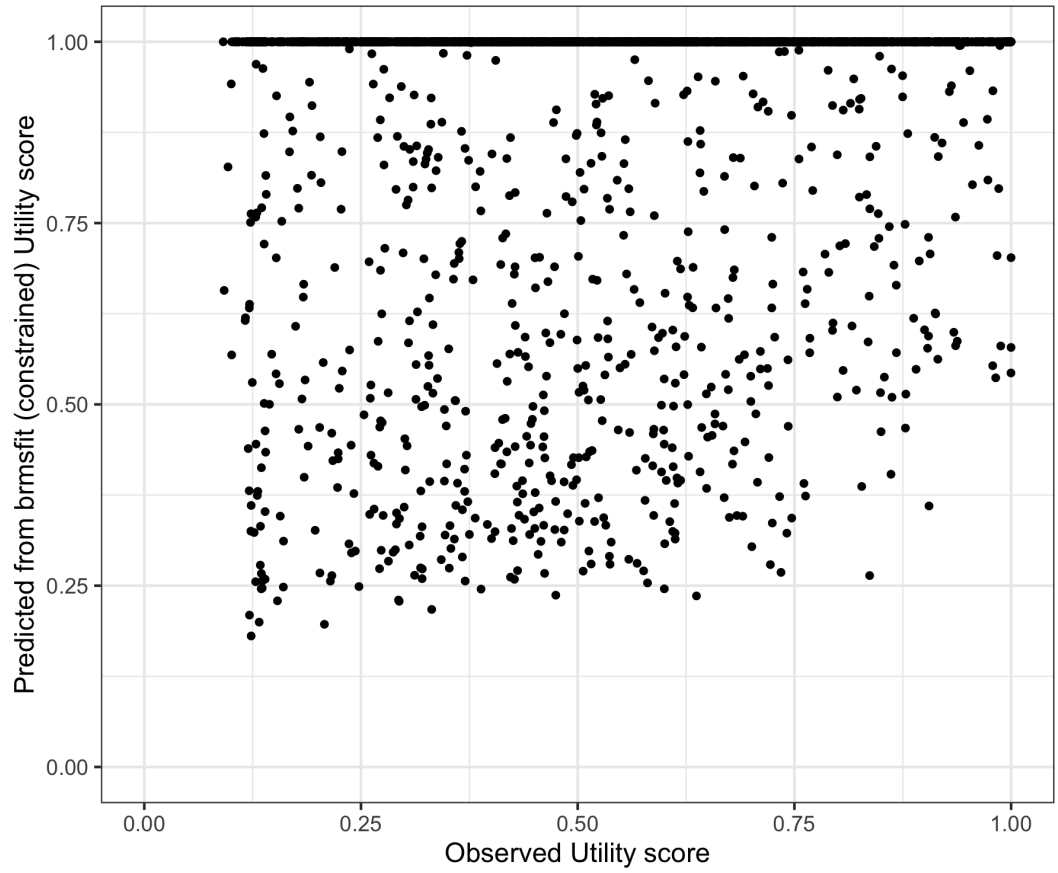


Figure 120: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

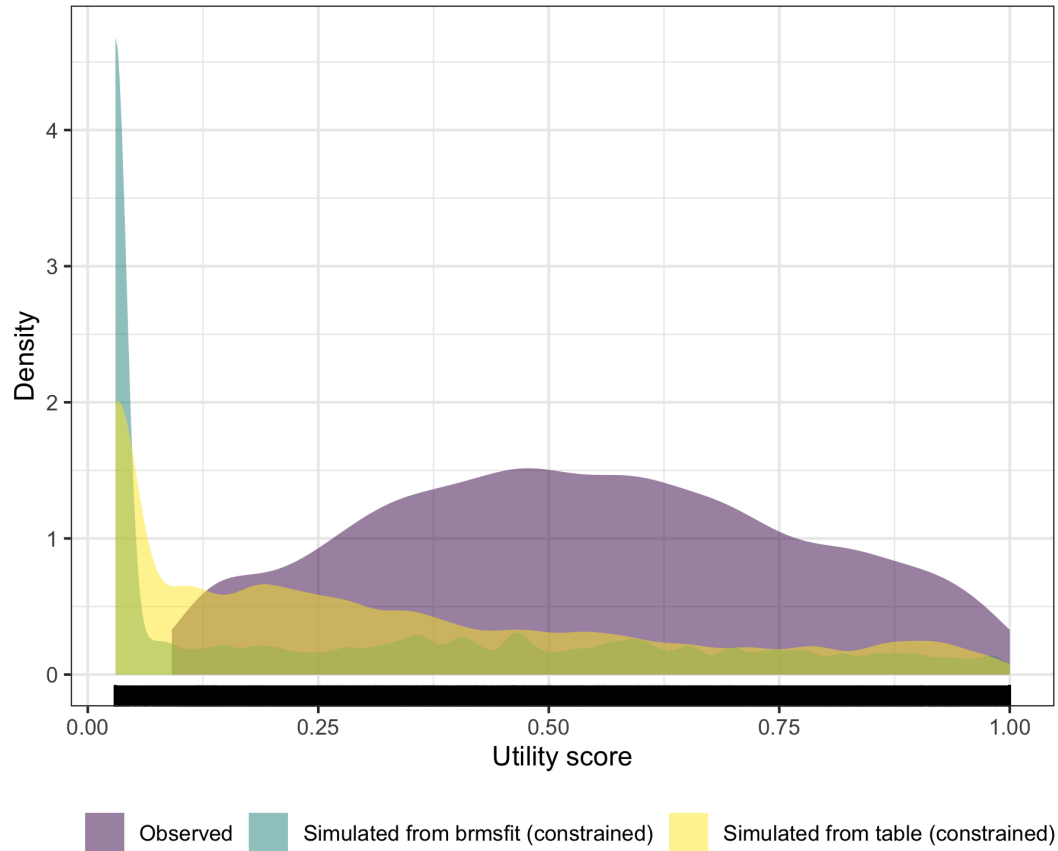


Figure 121: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

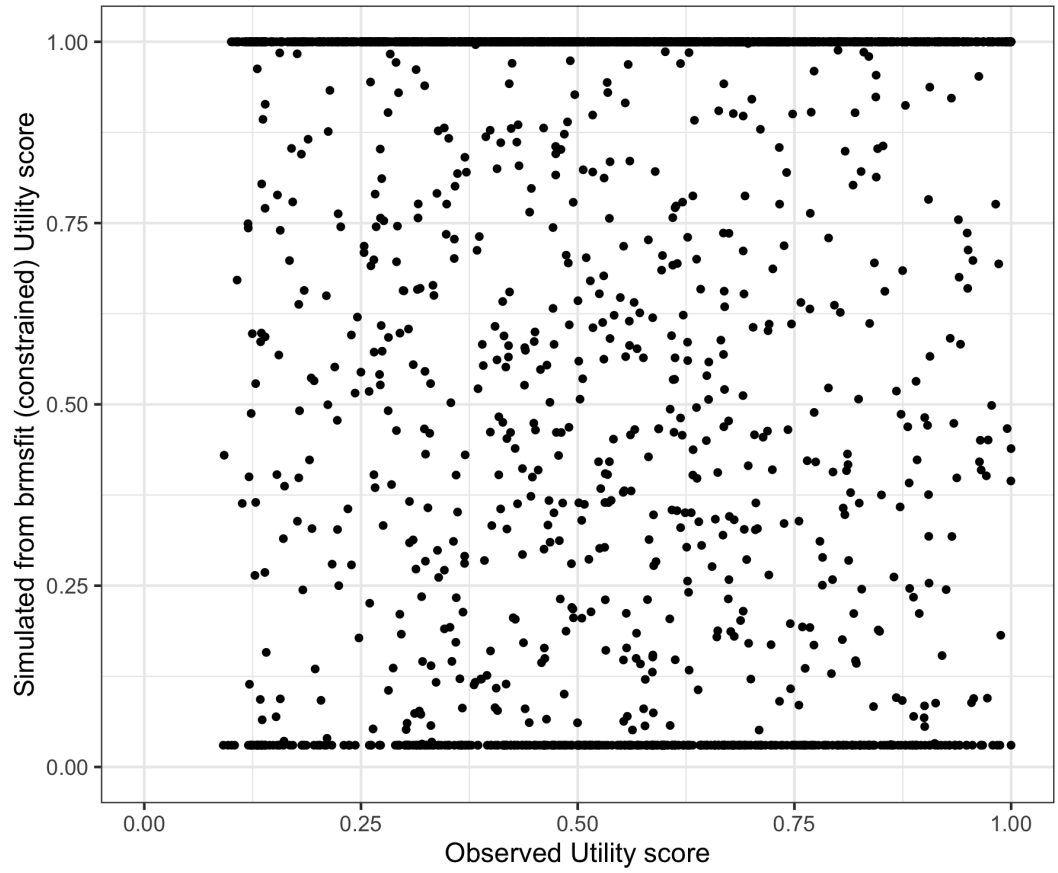


Figure 122: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

14 K10 with cdaysoor linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - cdaysoor (days out of role); and - dage (age). The catalogue reference for this model is K10_cdaysoor_2_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 1 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>

Table 27: K10 with cdaysoor linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3992)							
sd(Intercept)	0.24	0.14	0.01	0.49	1.12	29	23
Population-Level Effects:							
Intercept	1.71	0.06	1.60	1.82	1.00	7 237	5 918
K10_scaled	-5.55	0.12	-5.79	-5.31	1.00	7 686	5 625
cdaysoor	-0.01	0.00	-0.01	-0.01	1.00	7 634	6 050
dage	-0.02	0.00	-0.02	-0.01	1.00	7 681	5 756
Family Specific Parameters:							
sigma	0.52	0.08	0.33	0.60	1.12	30	22

Formula: AQOL6D_CLL ~K10_scaled + cdaysoor + dage + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 28: K10 with cdaysoor linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.56	0.12	0.434 , 0.824
RMSE	1.09	0.02	1.076 , 1.104

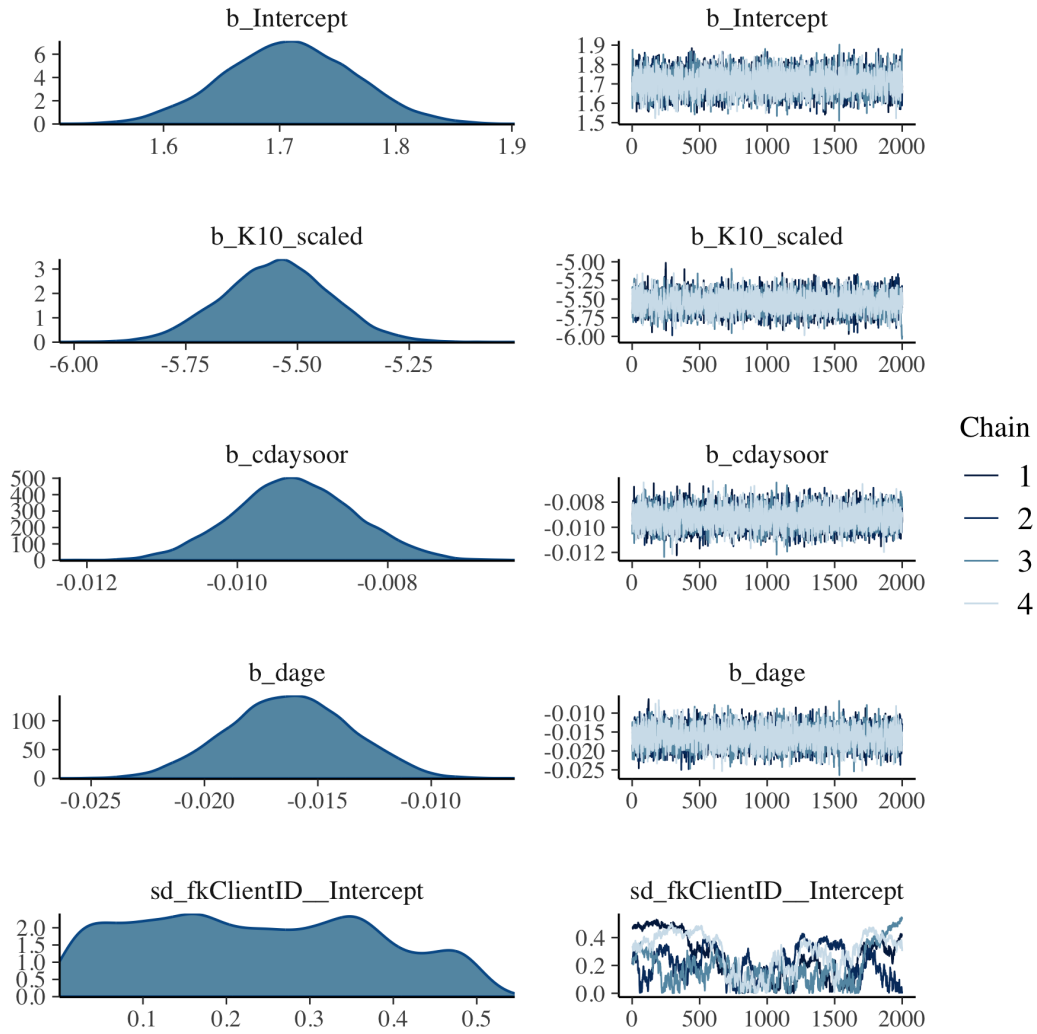


Figure 123: K10 with cdaysoor linear mixed model with complementary log log transformation population level effects

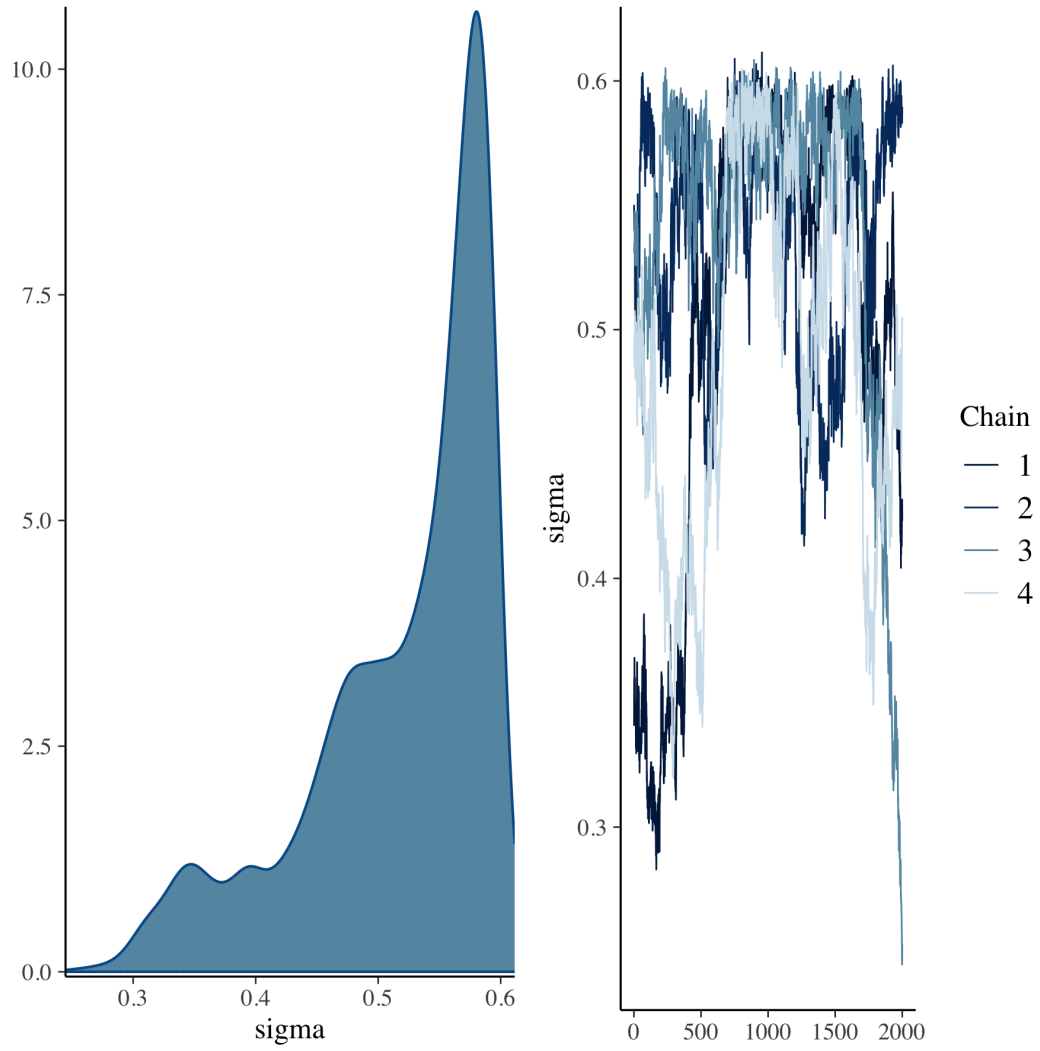


Figure 124: K10 with cdaysoor linear mixed model with complementary log log transformation group level effects

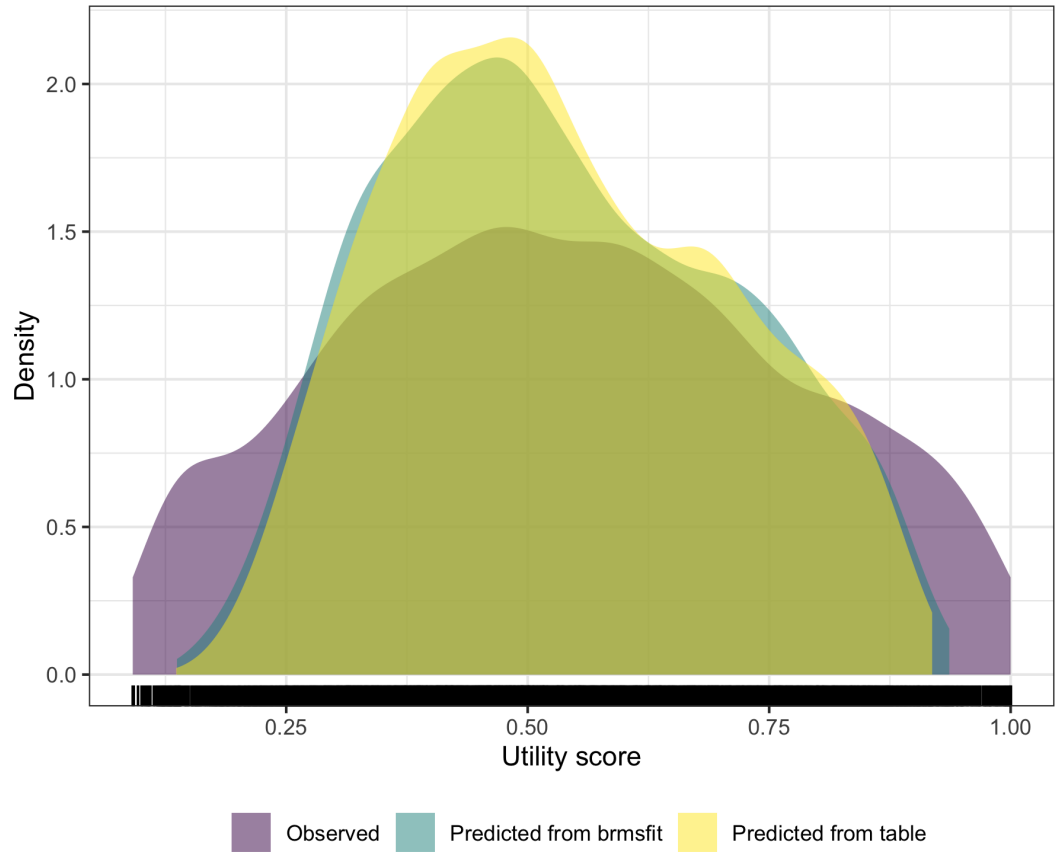


Figure 125: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

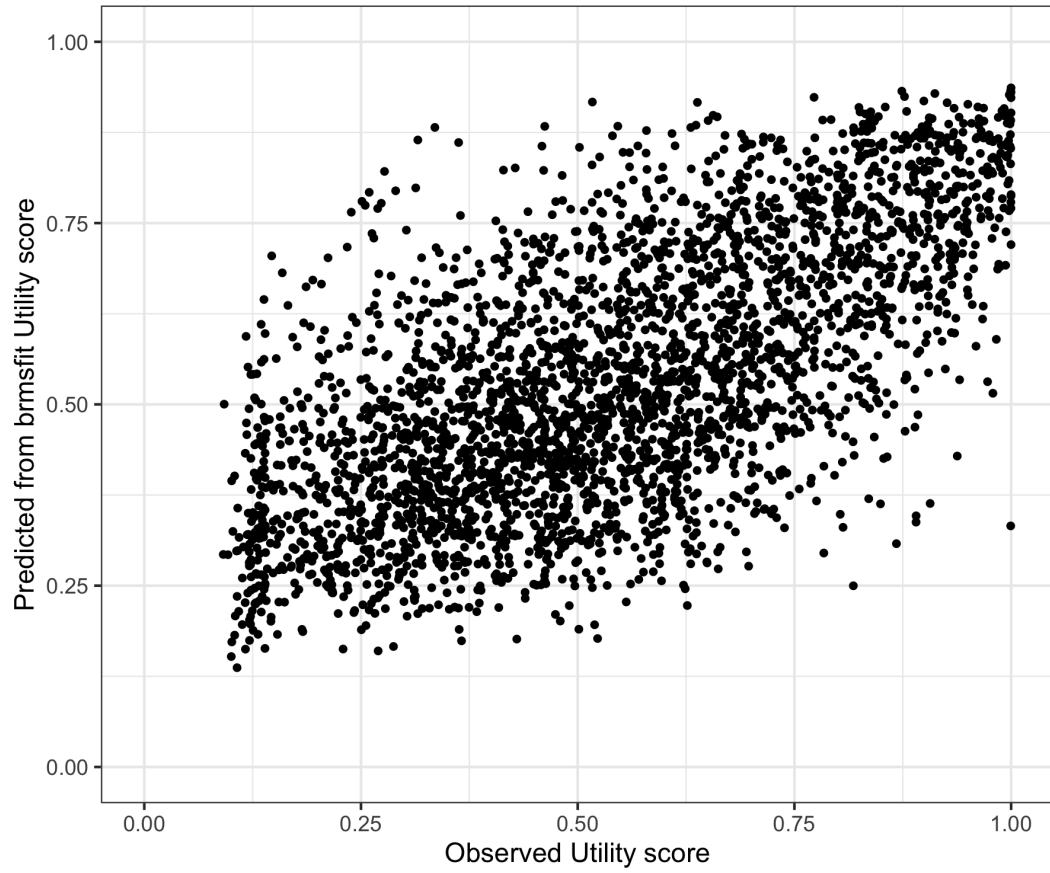


Figure 126: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

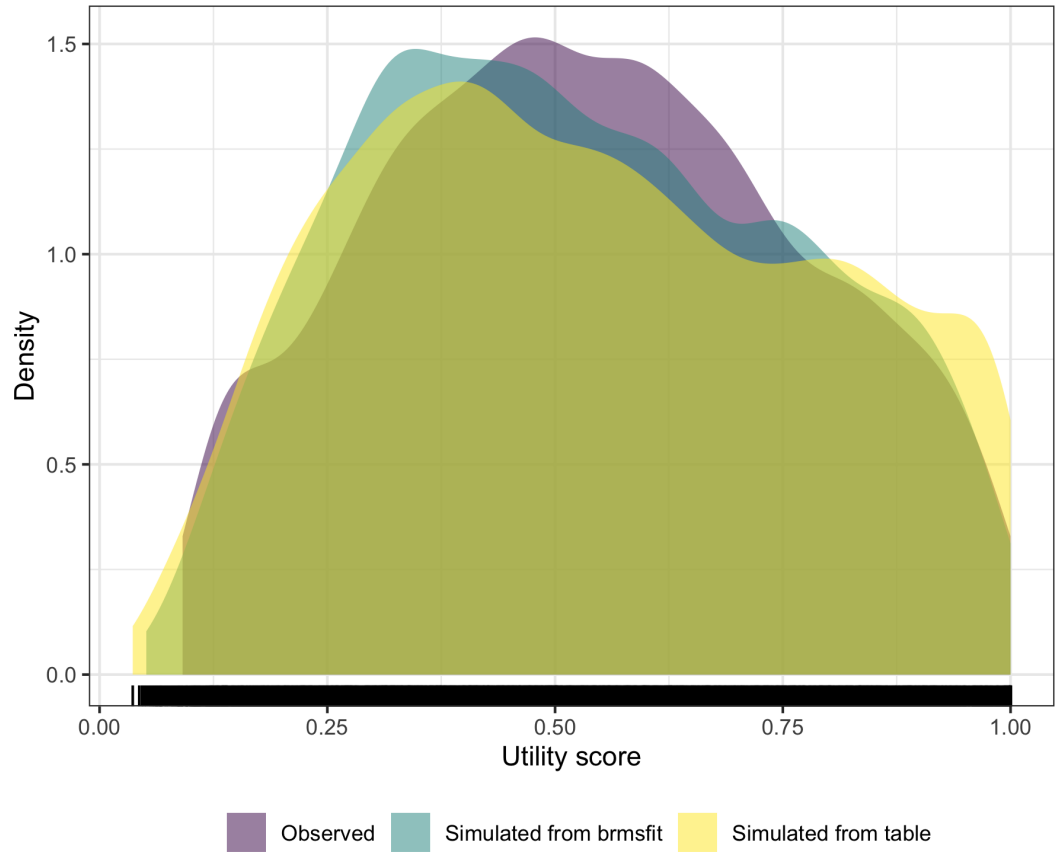


Figure 127: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

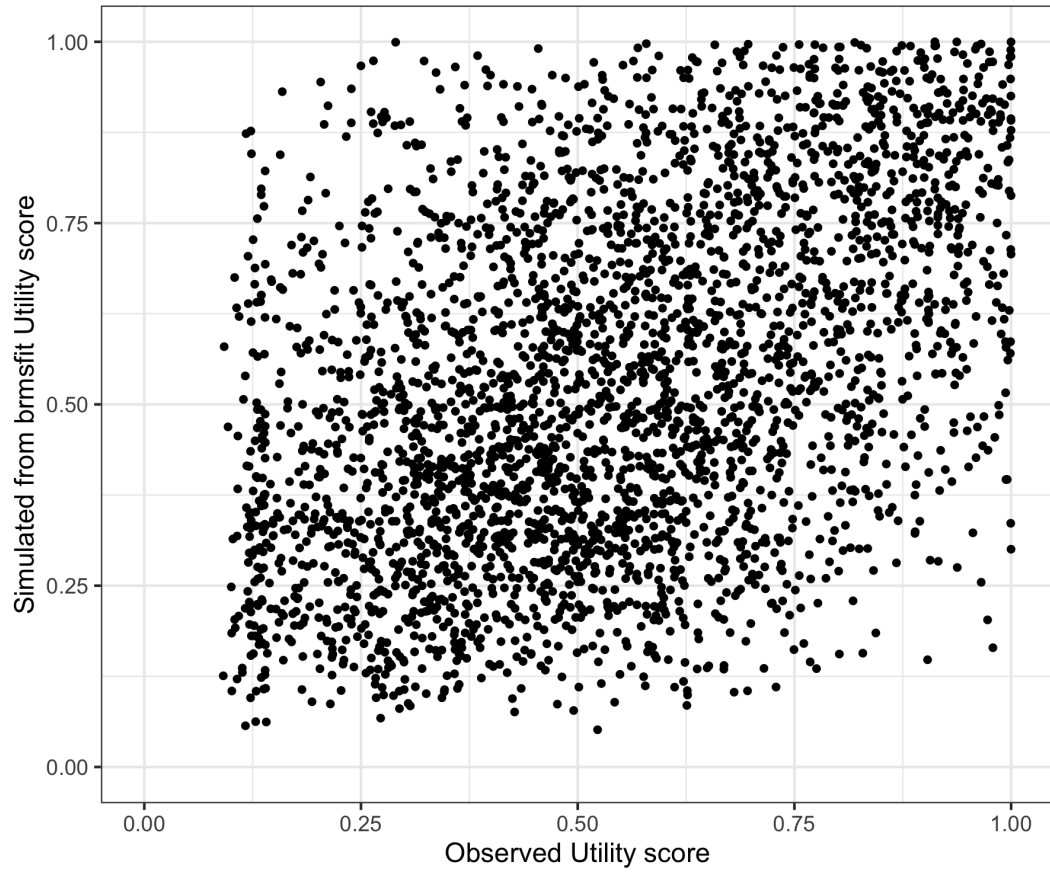


Figure 128: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

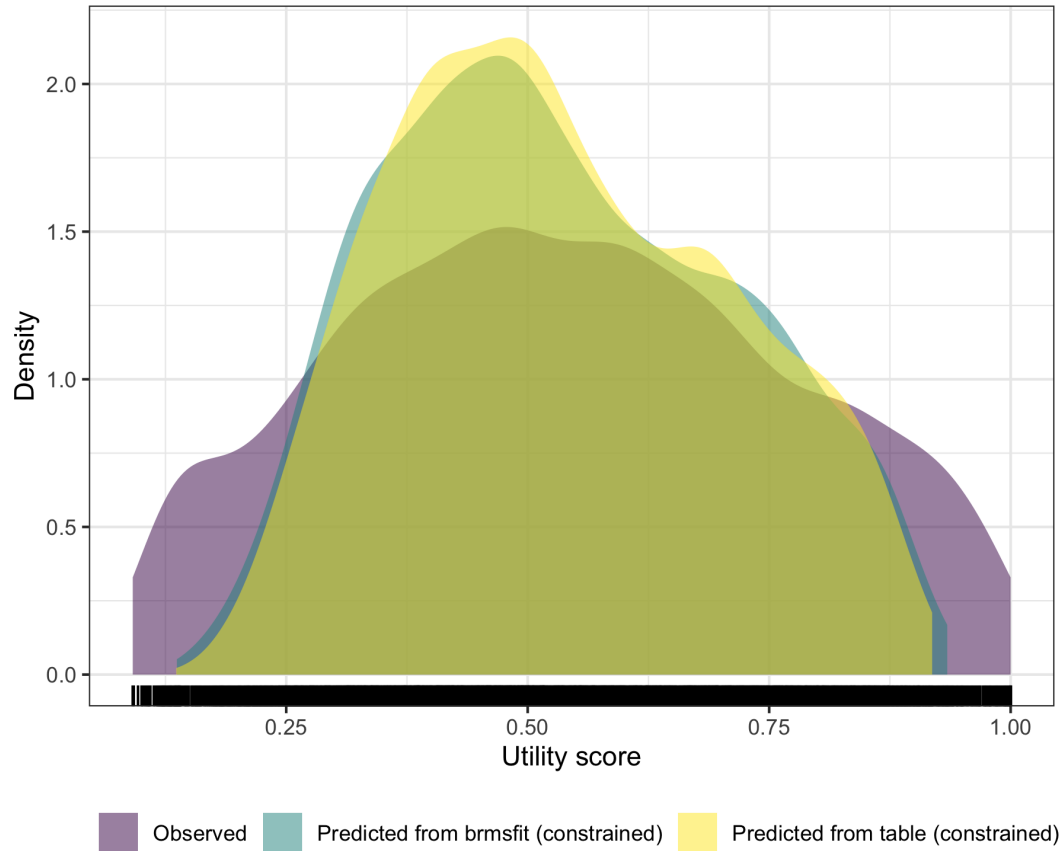


Figure 129: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

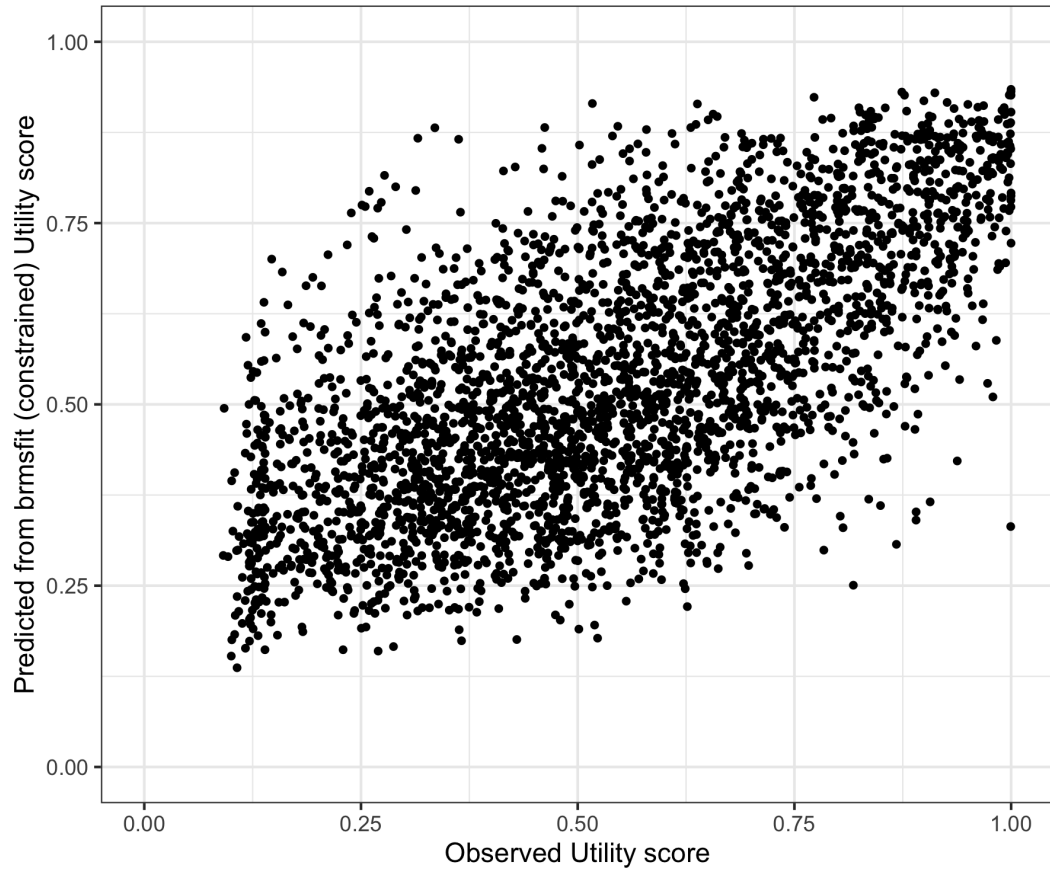


Figure 130: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

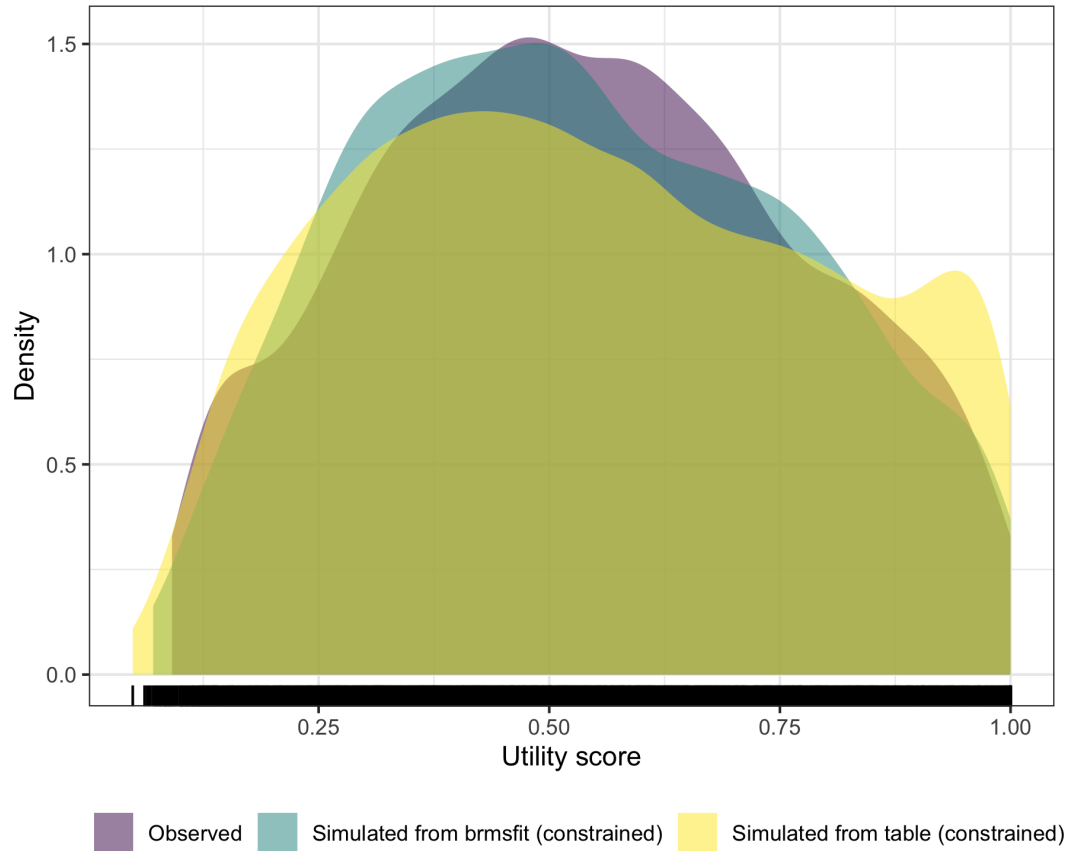


Figure 131: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

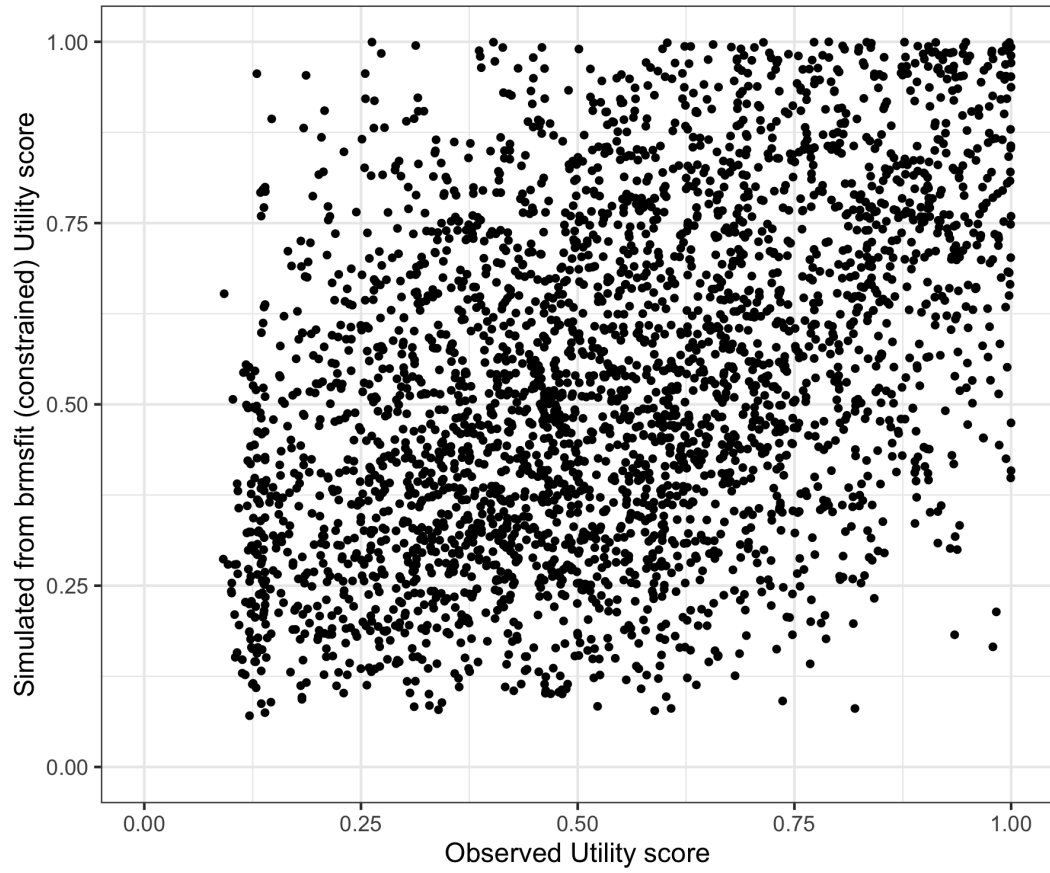


Figure 132: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

15 K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - cdaysoor (days out of role); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is K10_cdaysoor_3_GLM_GSN_LOG.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 29: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3992)							
sd(Intercept)	1.54	2.54	0.00	5.94	2.78	5	16
Population-Level Effects:							
Intercept	0.50	0.64	-0.01	1.82	2.78	5	11
K10_scaled	-2.01	1.01	-3.10	-0.68	2.78	5	46
cdaysoor	0.00	0.02	-0.01	0.07	1.68	6	15
dgenderMale	-0.37	0.43	-0.99	0.05	2.82	5	36
dgenderOther	0.68	0.71	-0.09	1.45	2.27	5	
Family Specific Parameters:							
sigma	0.72	0.81	0.16	2.10	2.83	5	

Formula: AQOL6D ~K10_scaled + cdaysoor + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 30: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.46	0.03	0.433 , 0.5
RMSE	40 570.82	96 439.59	0.238 , 25540.145

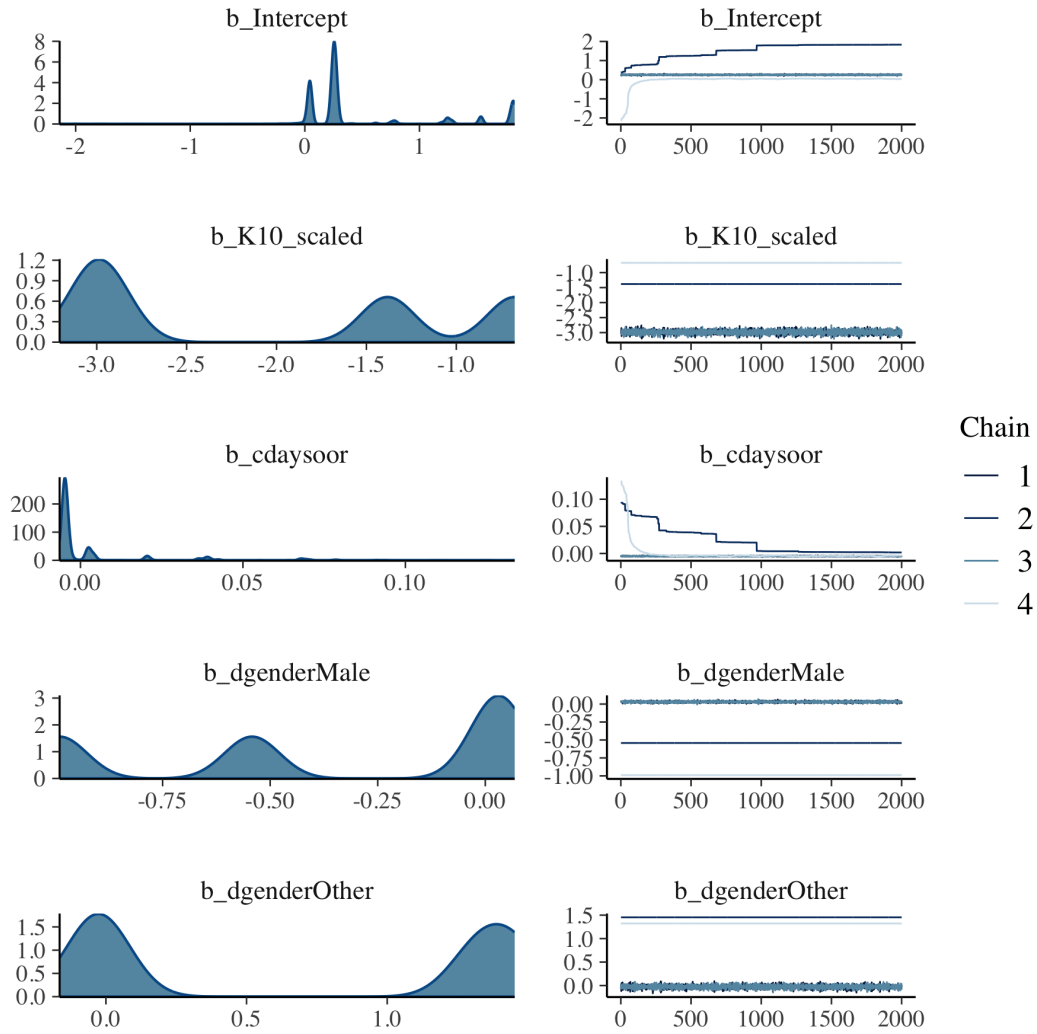


Figure 133: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link population level effects

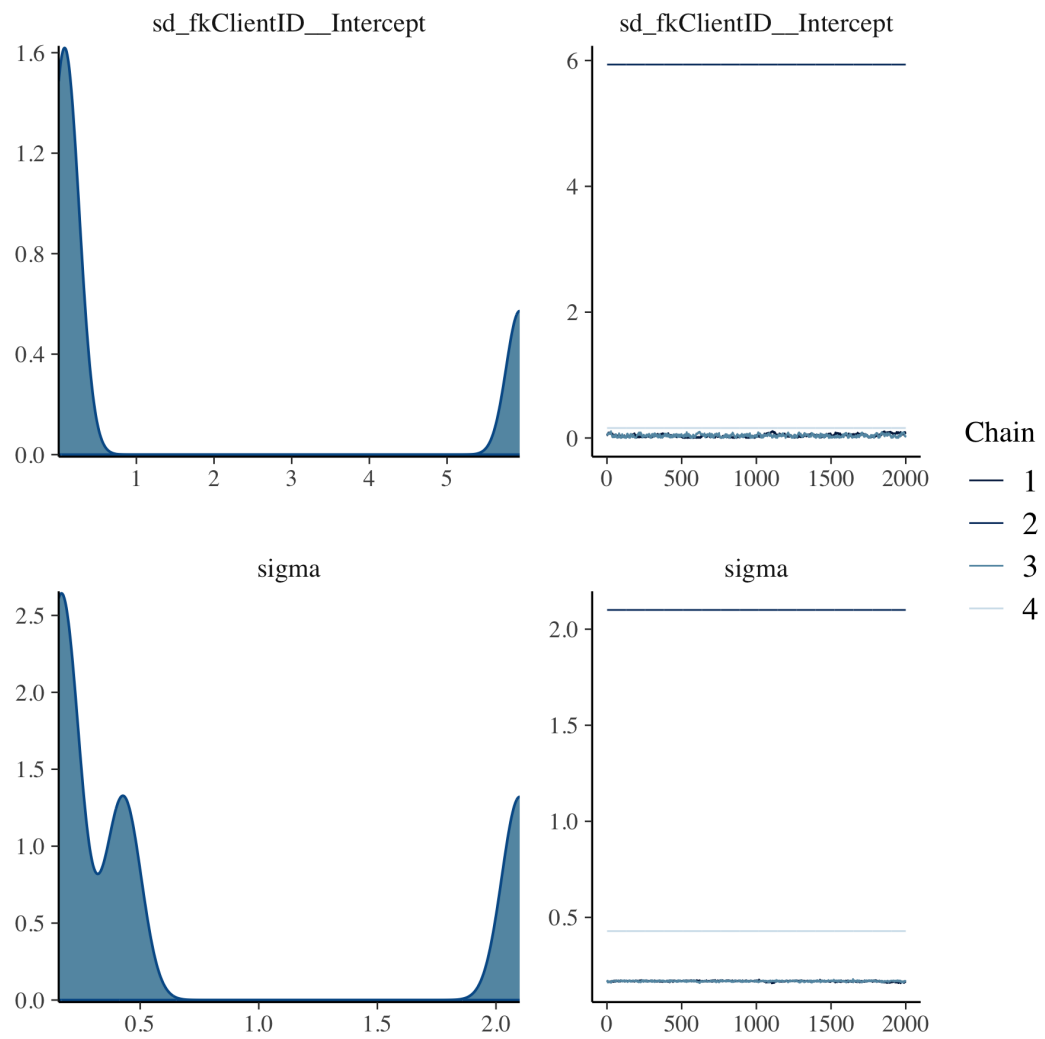


Figure 134: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link group level effects

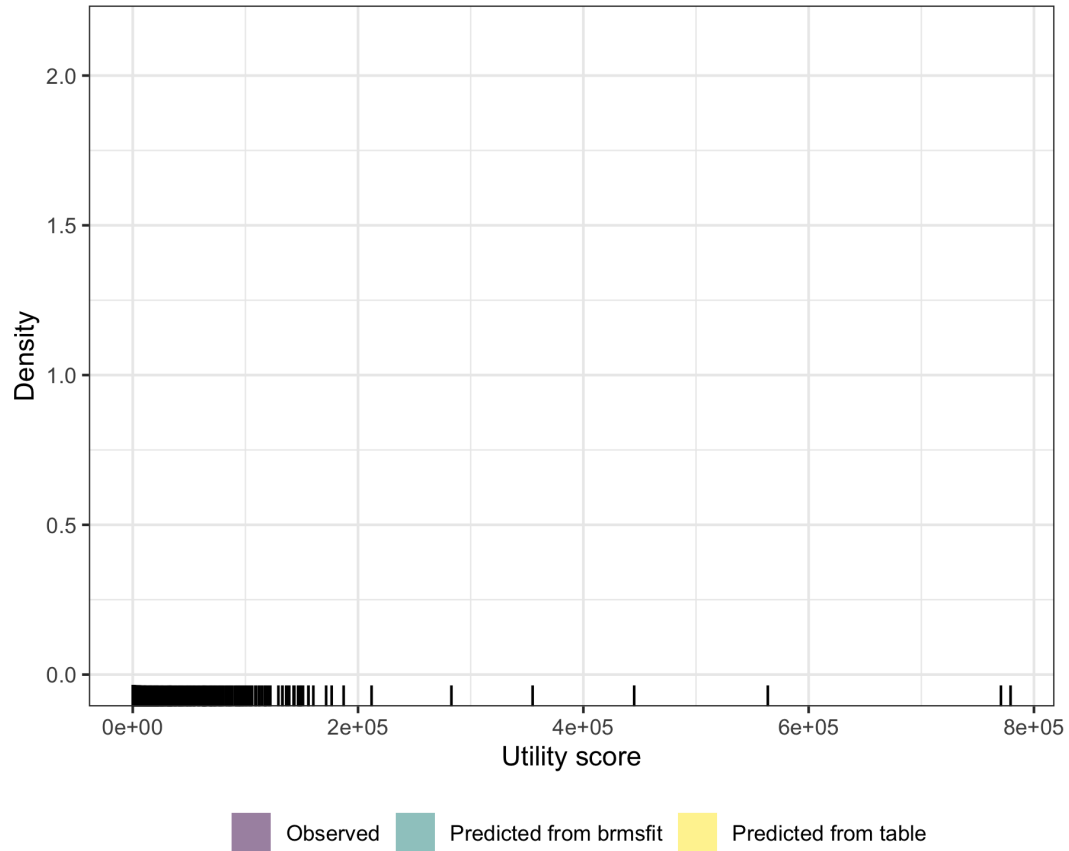


Figure 135: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

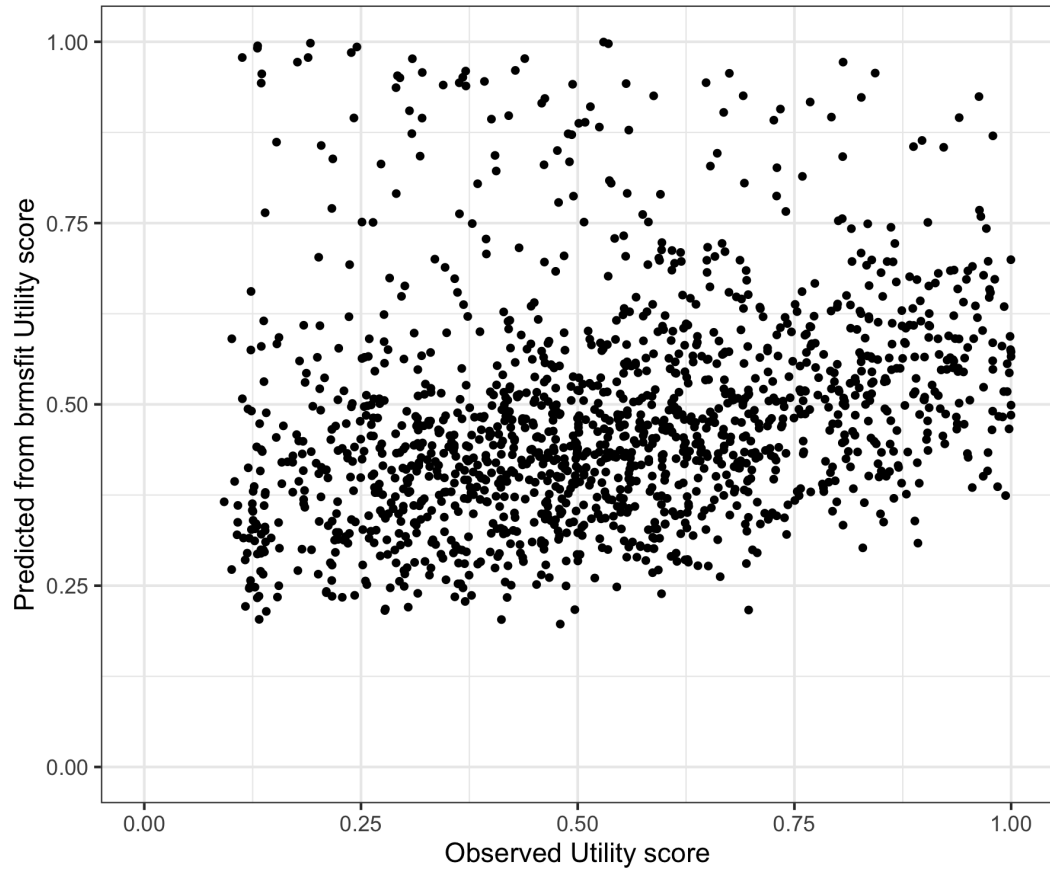


Figure 136: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

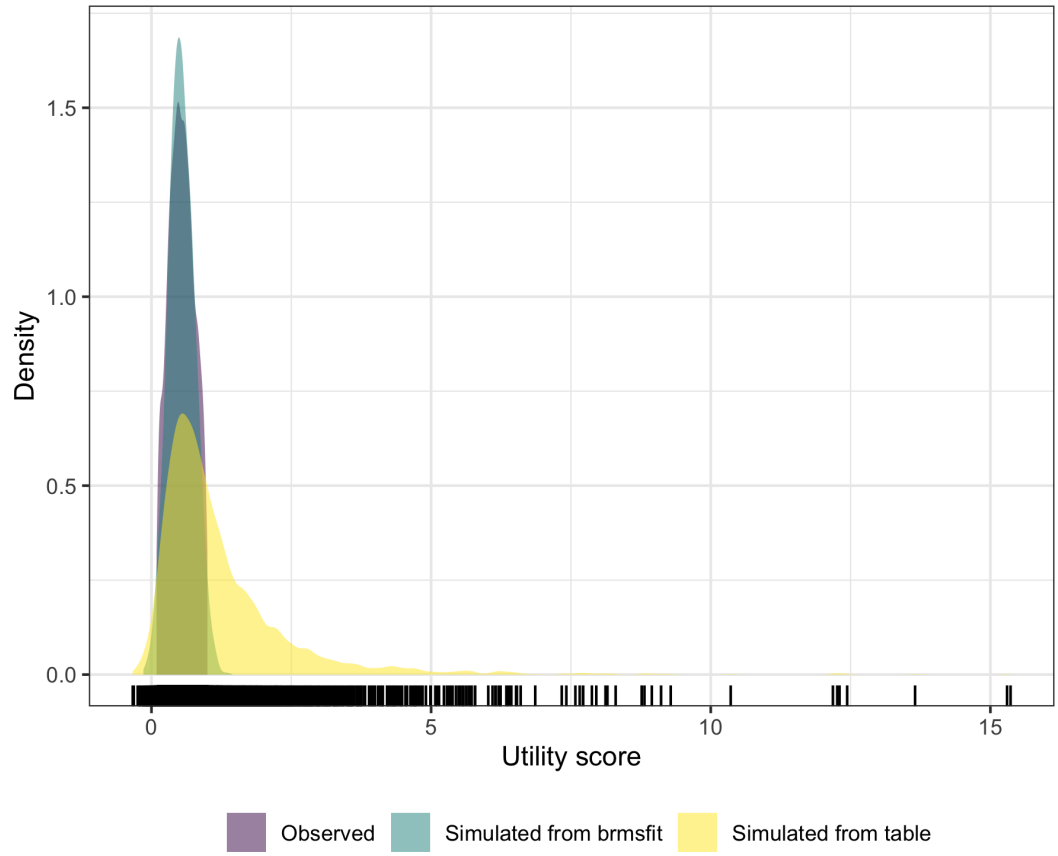


Figure 137: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

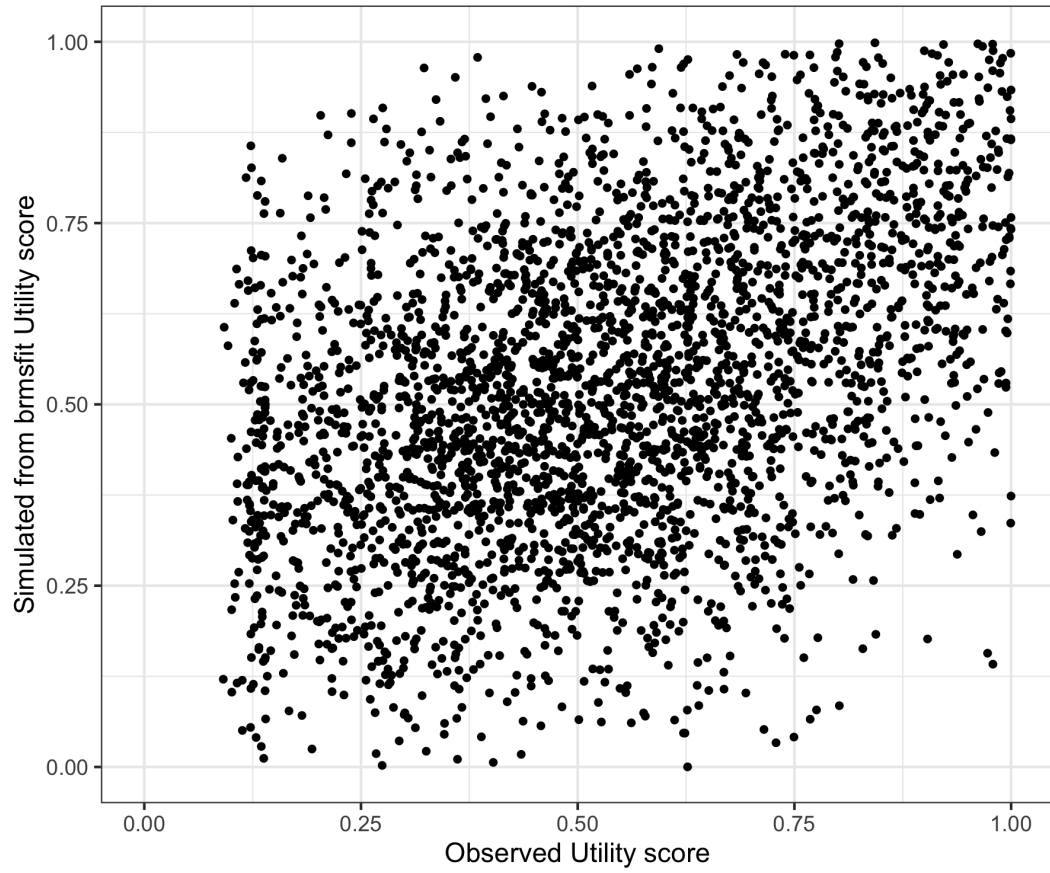


Figure 138: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

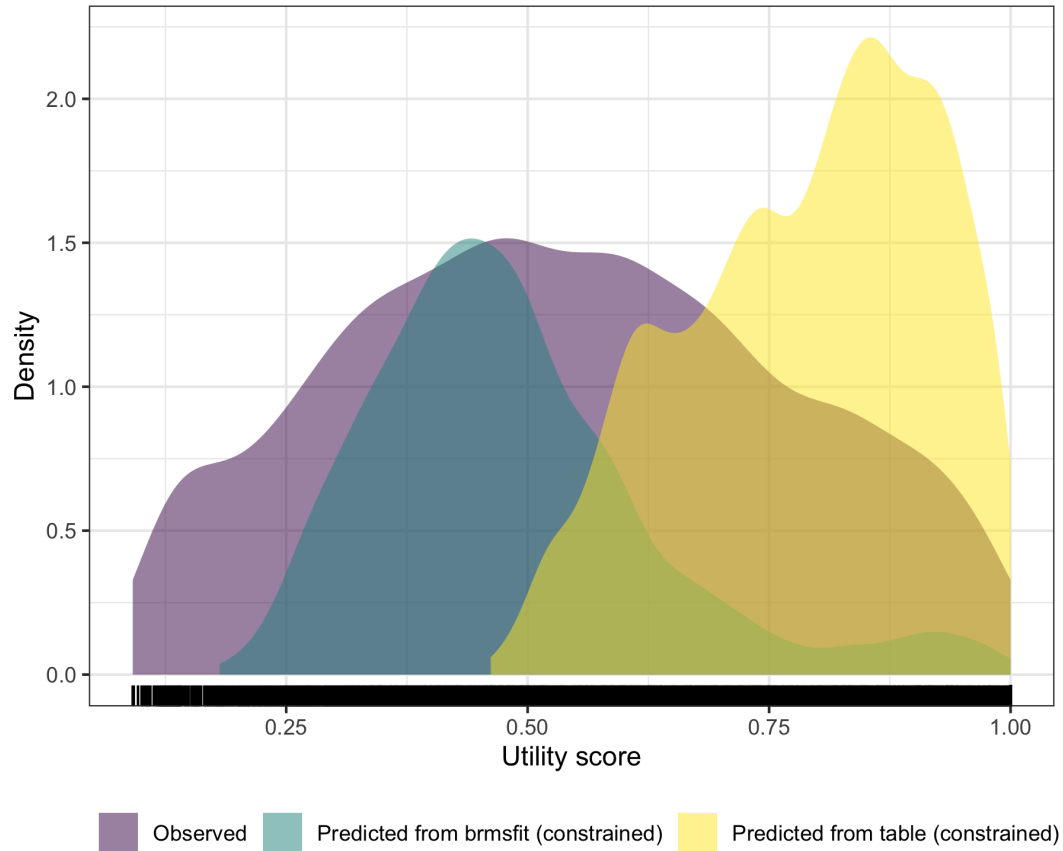


Figure 139: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

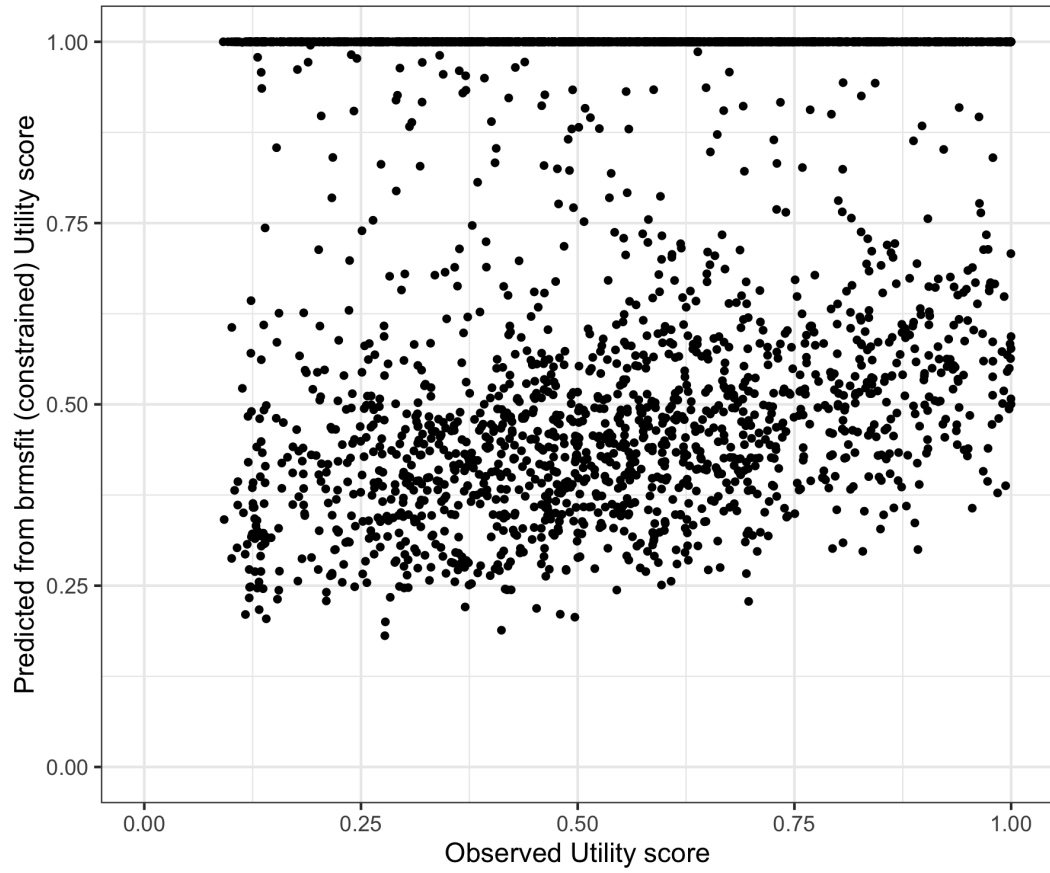


Figure 140: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

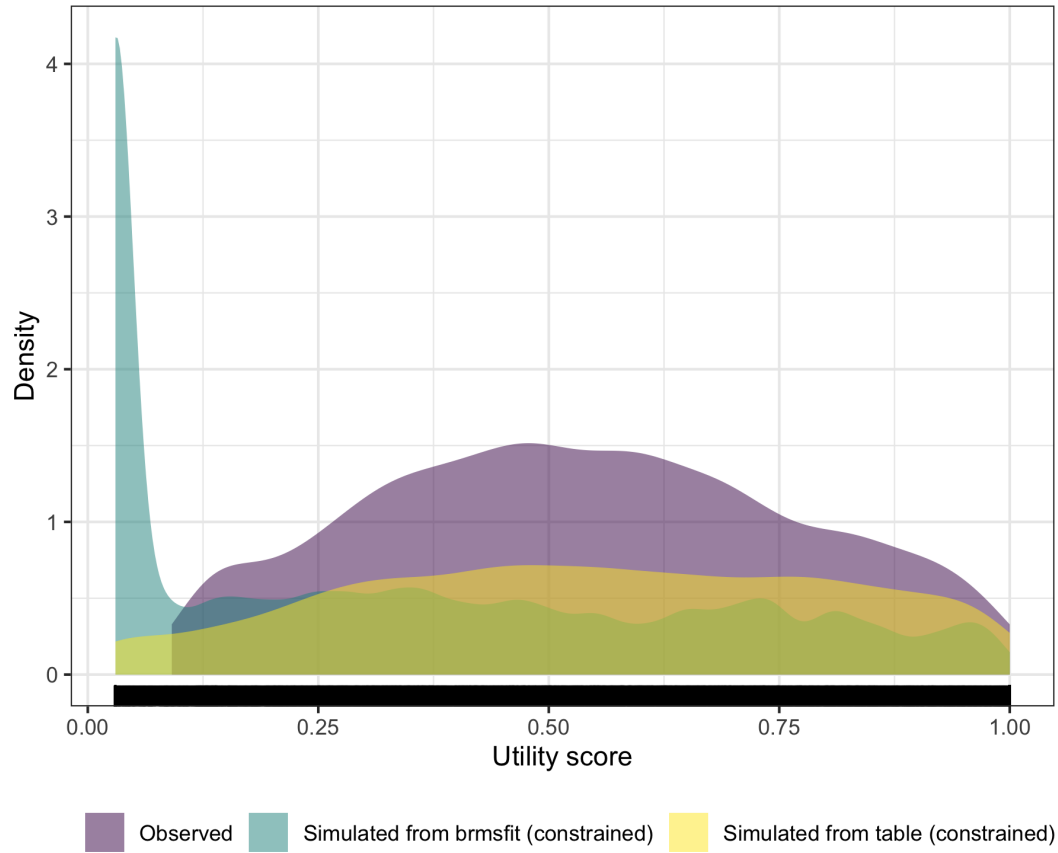


Figure 141: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

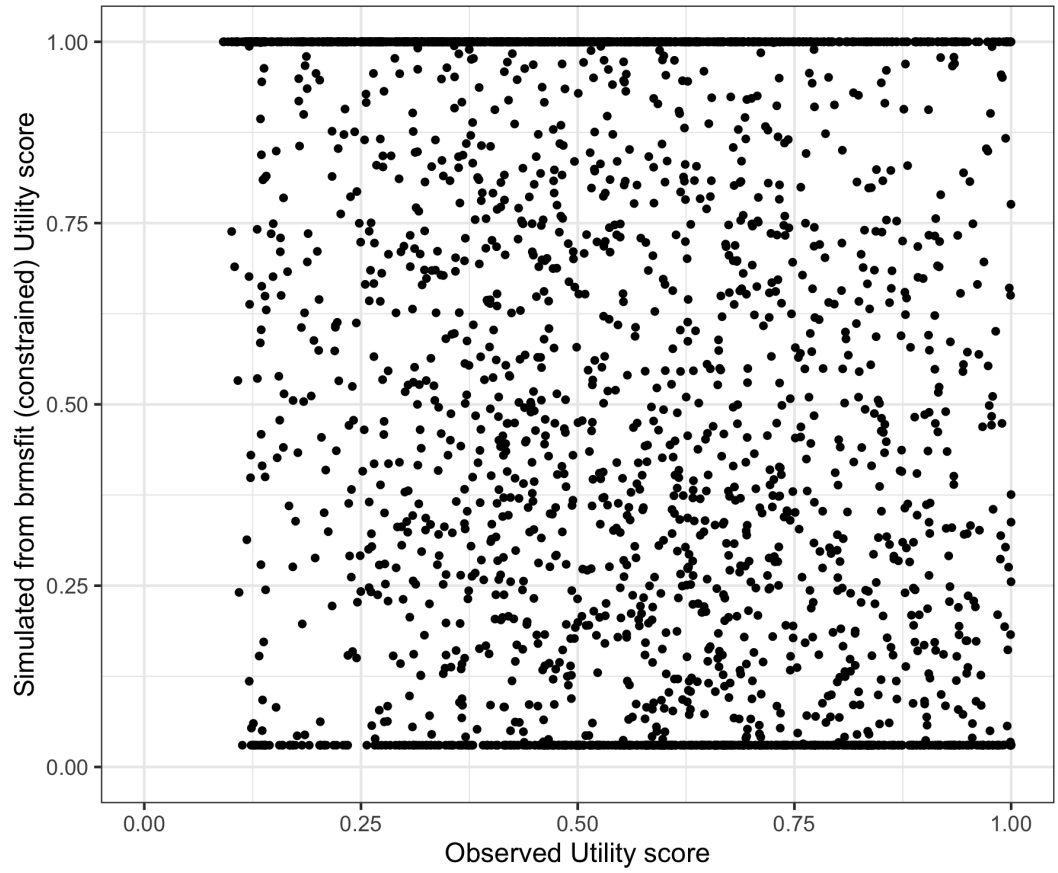


Figure 142: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

16 K10 with cdaysoor linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - cdaysoor (days out of role); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is K10_cdaysoor_3_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 31: K10 with cdaysoor linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3992)							
sd(Intercept)	0.32	0.14	0.03	0.52	1.40	9	22
Population-Level Effects:							
Intercept	1.39	0.04	1.32	1.46	1.00	6 324	5 666
K10_scaled	-5.54	0.12	-5.78	-5.30	1.00	6 337	5 477
cdaysoor	-0.01	0.00	-0.01	-0.01	1.00	7 574	5 458
dgenderMale	0.07	0.02	0.03	0.11	1.00	7 276	5 980
dgenderOther	-0.04	0.06	-0.17	0.08	1.00	6 969	5 712
Family Specific Parameters:							
sigma	0.47	0.10	0.29	0.59	1.42	9	21

Formula: AQOL6D_CLL ~K10_scaled + cdaysoor + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 32: K10 with cdaysoor linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.63	0.14	0.437 , 0.867
RMSE	1.08	0.02	1.056 , 1.098

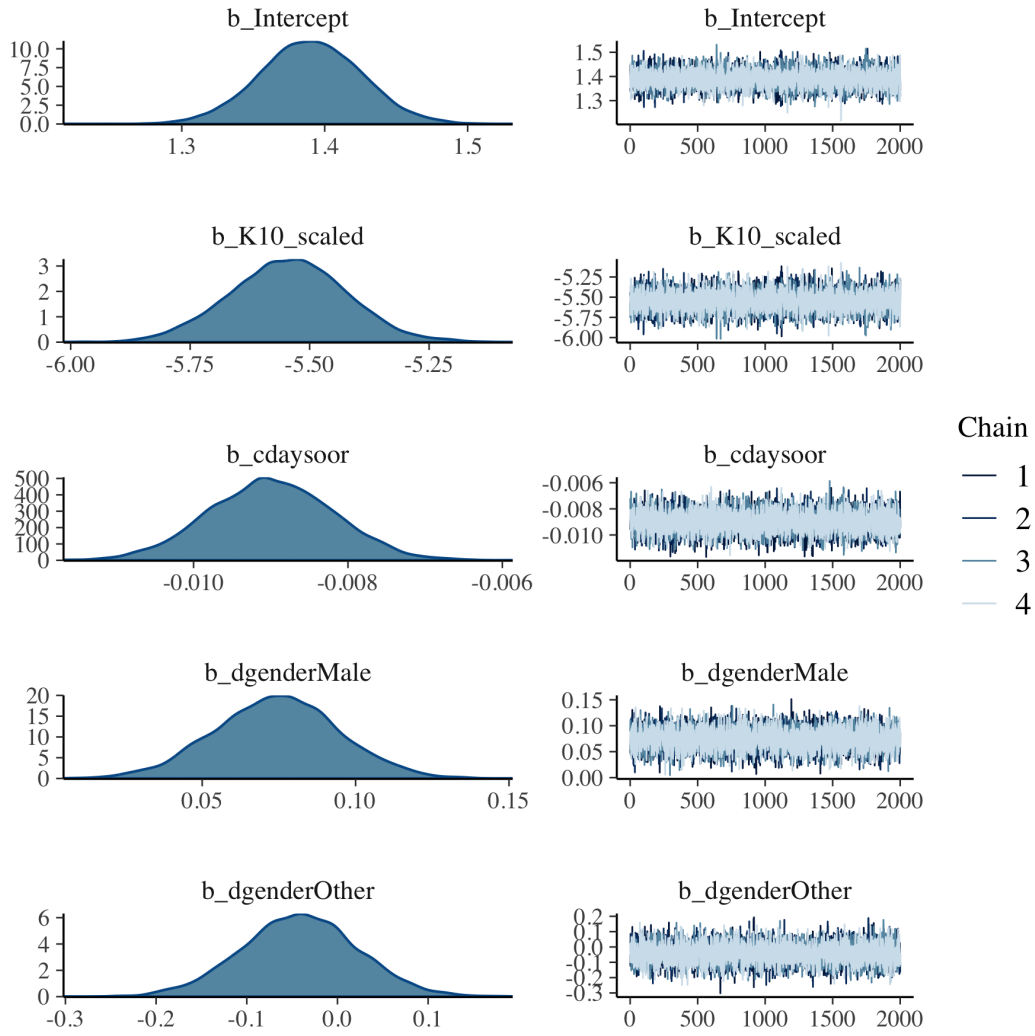


Figure 143: K10 with cdaysoor linear mixed model with complementary log log transformation population level effects

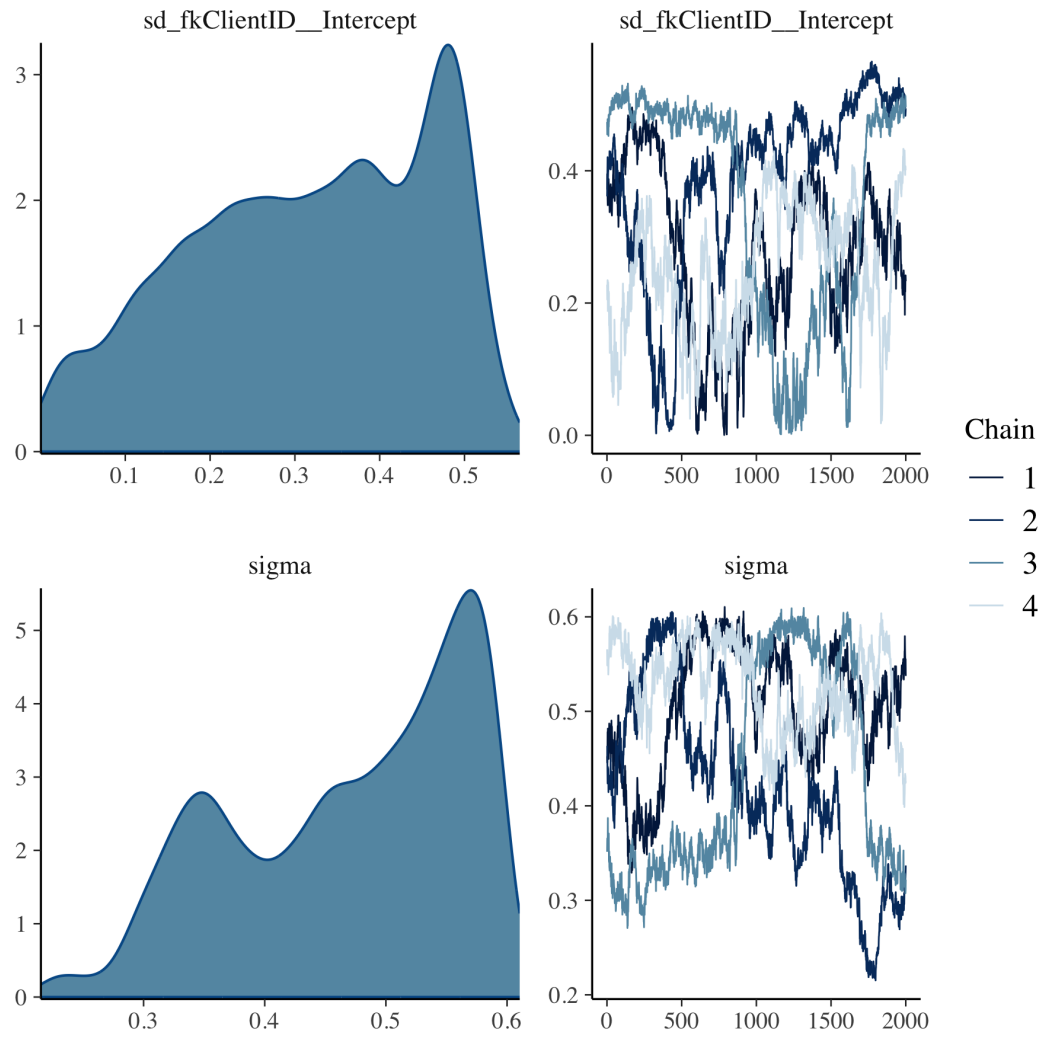


Figure 144: K10 with cdaysoor linear mixed model with complementary log log transformation group level effects

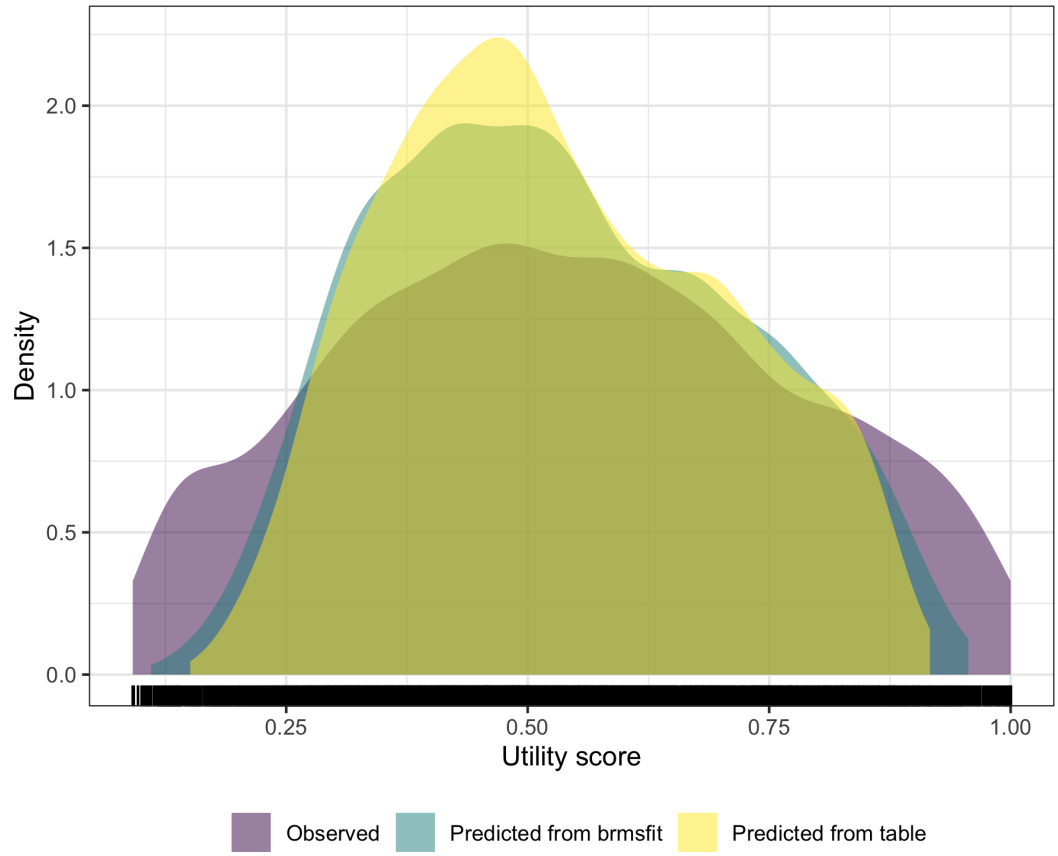


Figure 145: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

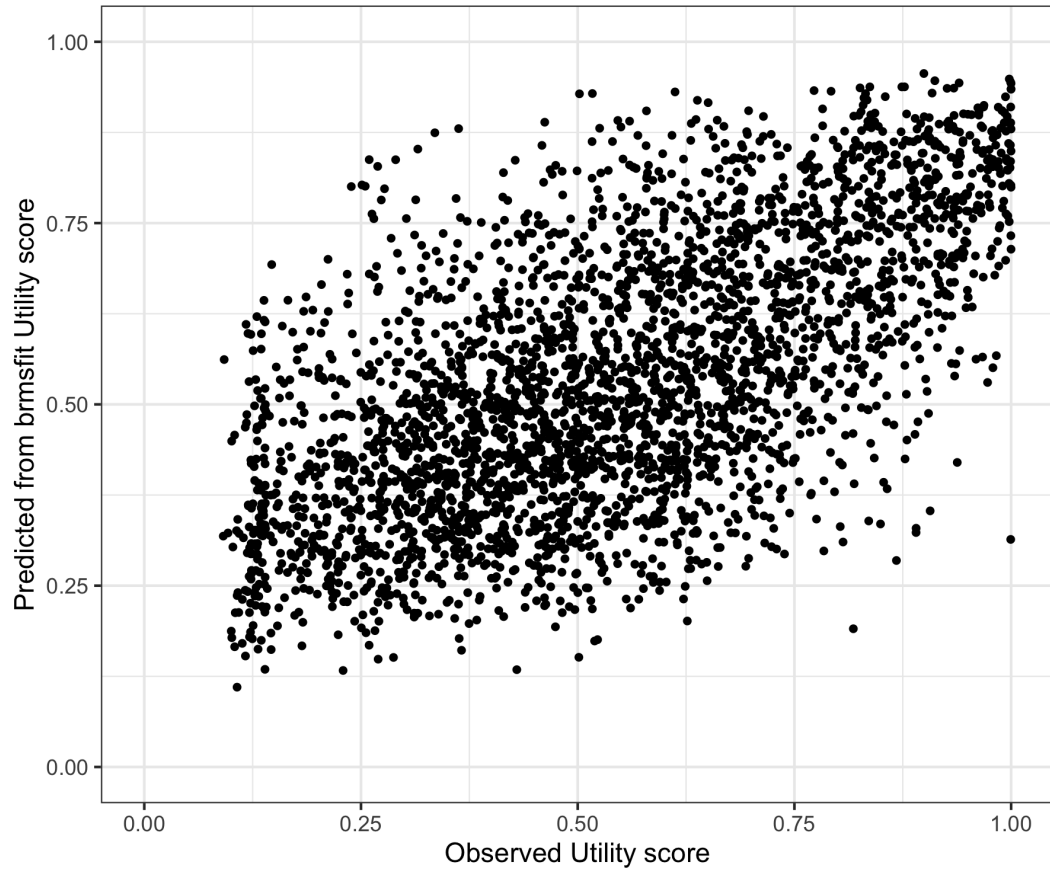


Figure 146: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

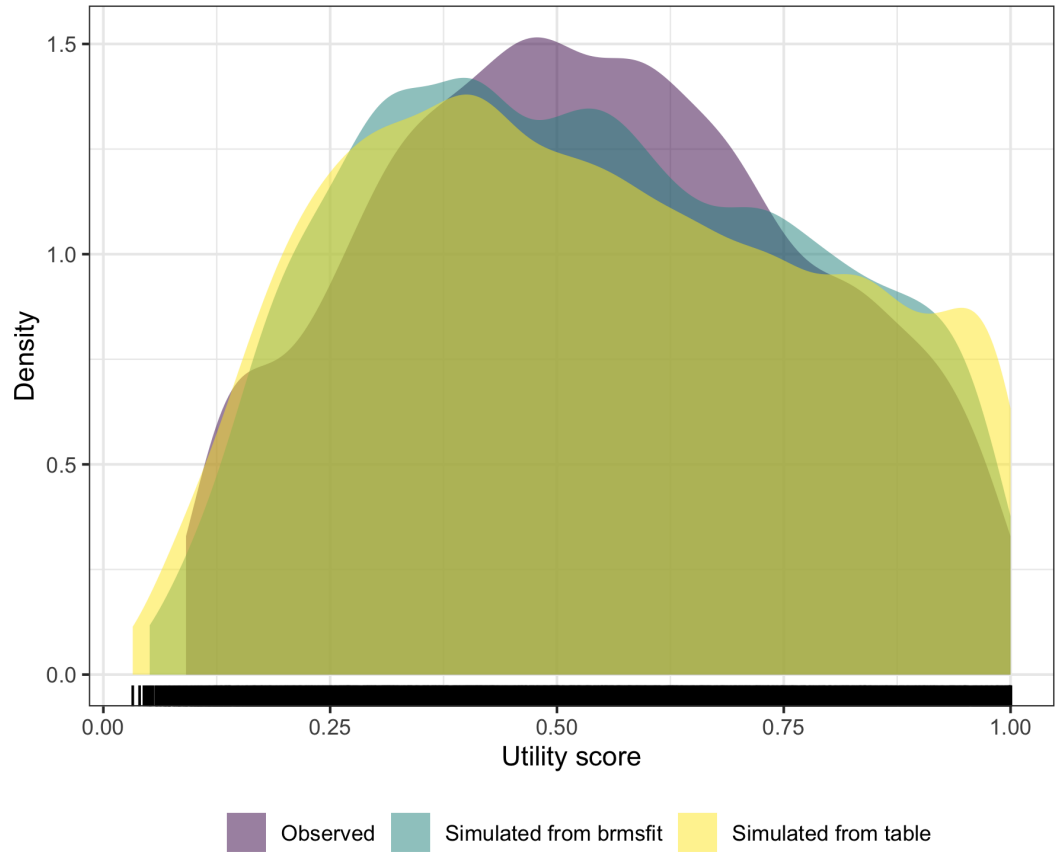


Figure 147: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

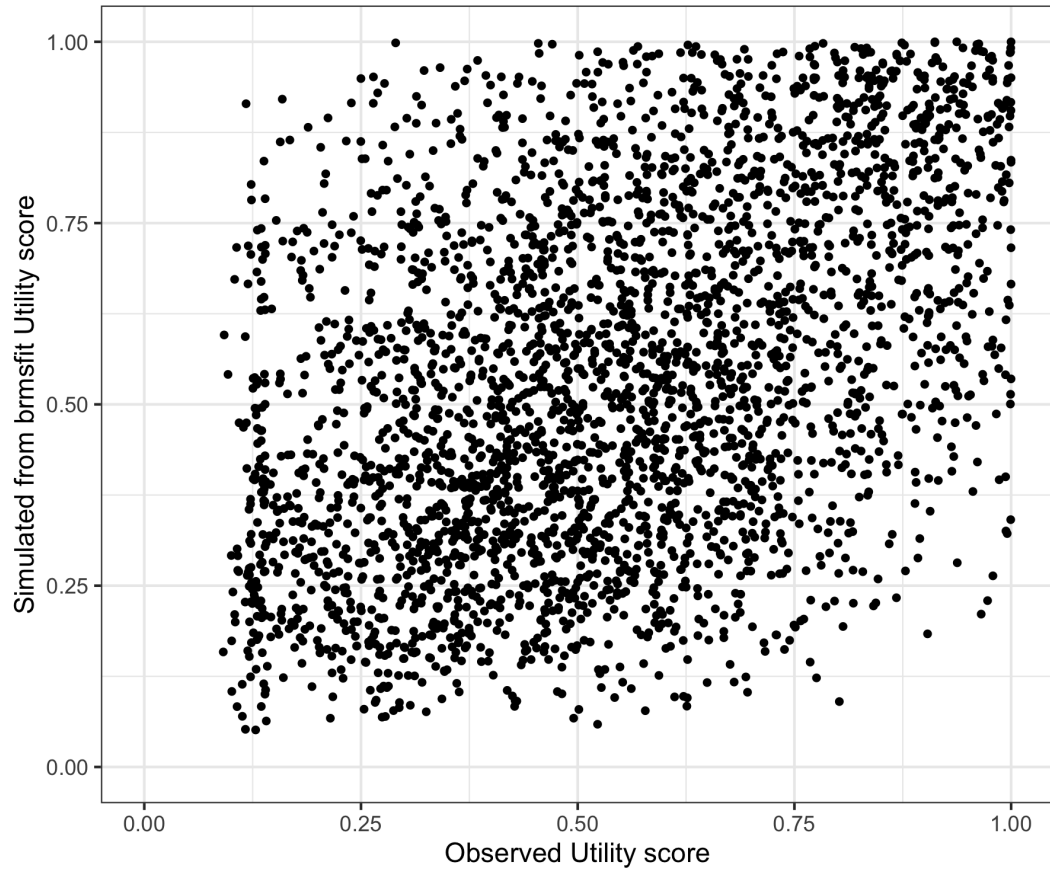


Figure 148: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

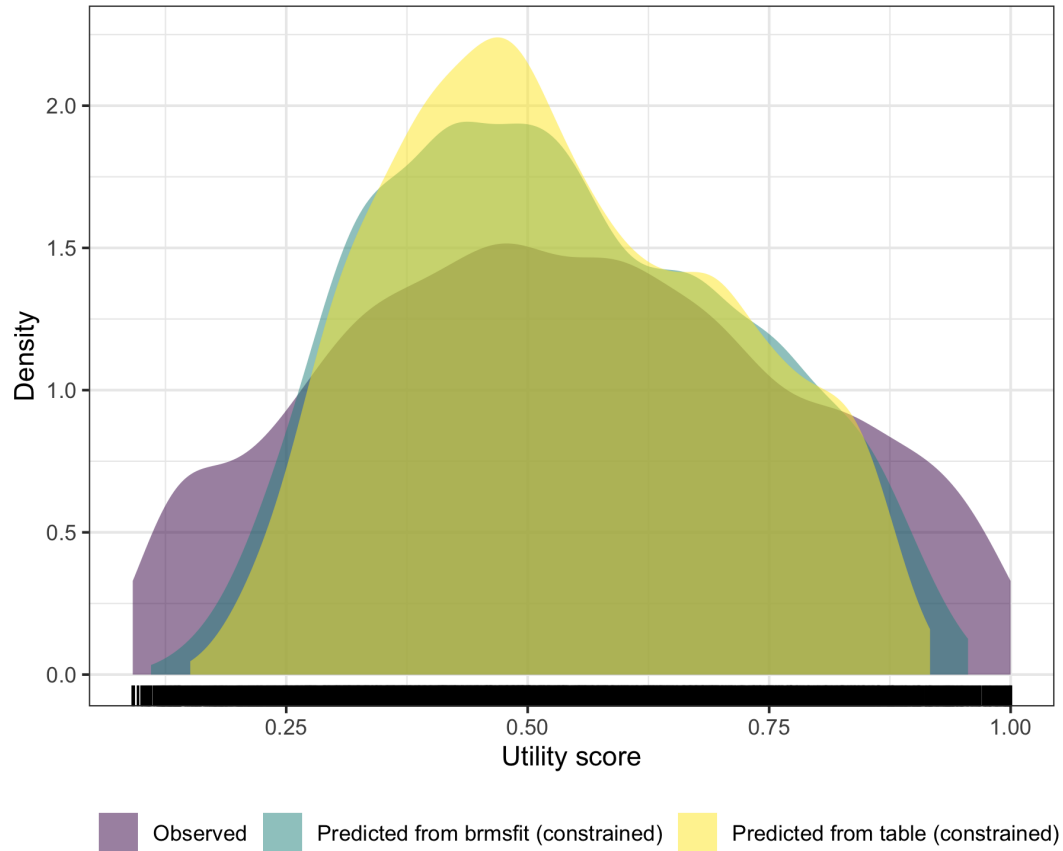


Figure 149: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

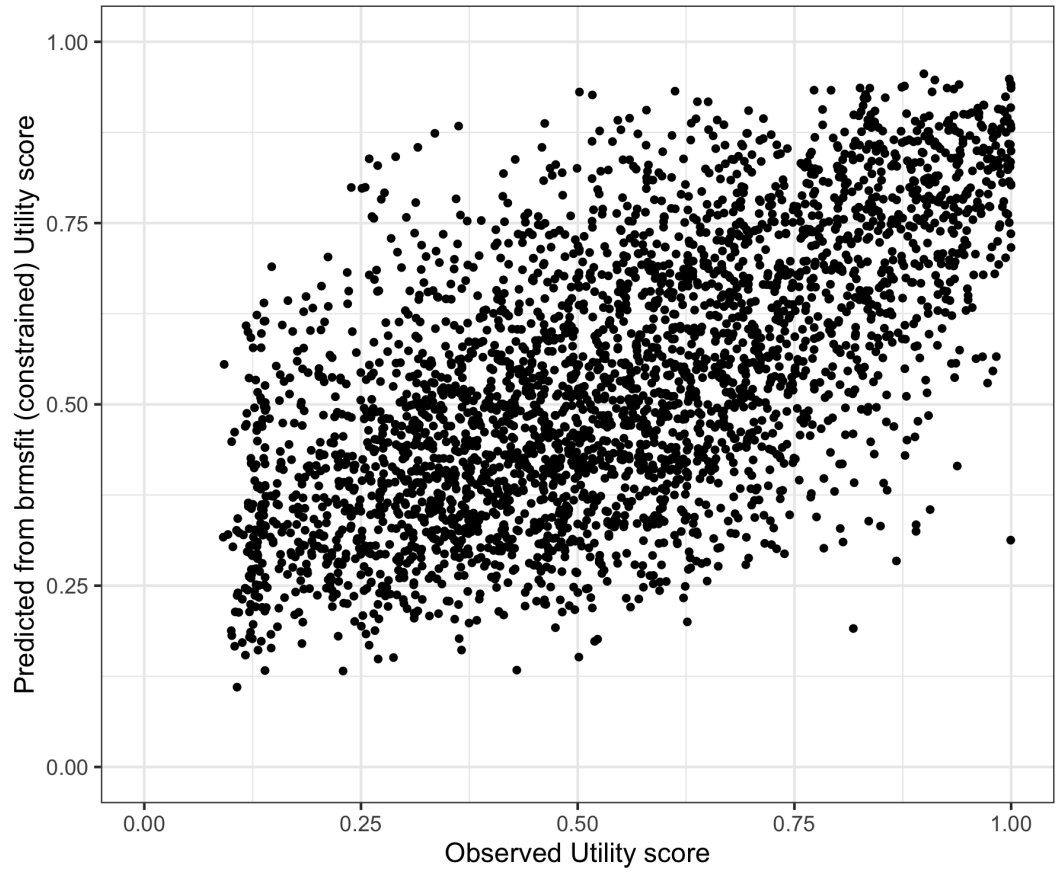


Figure 150: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

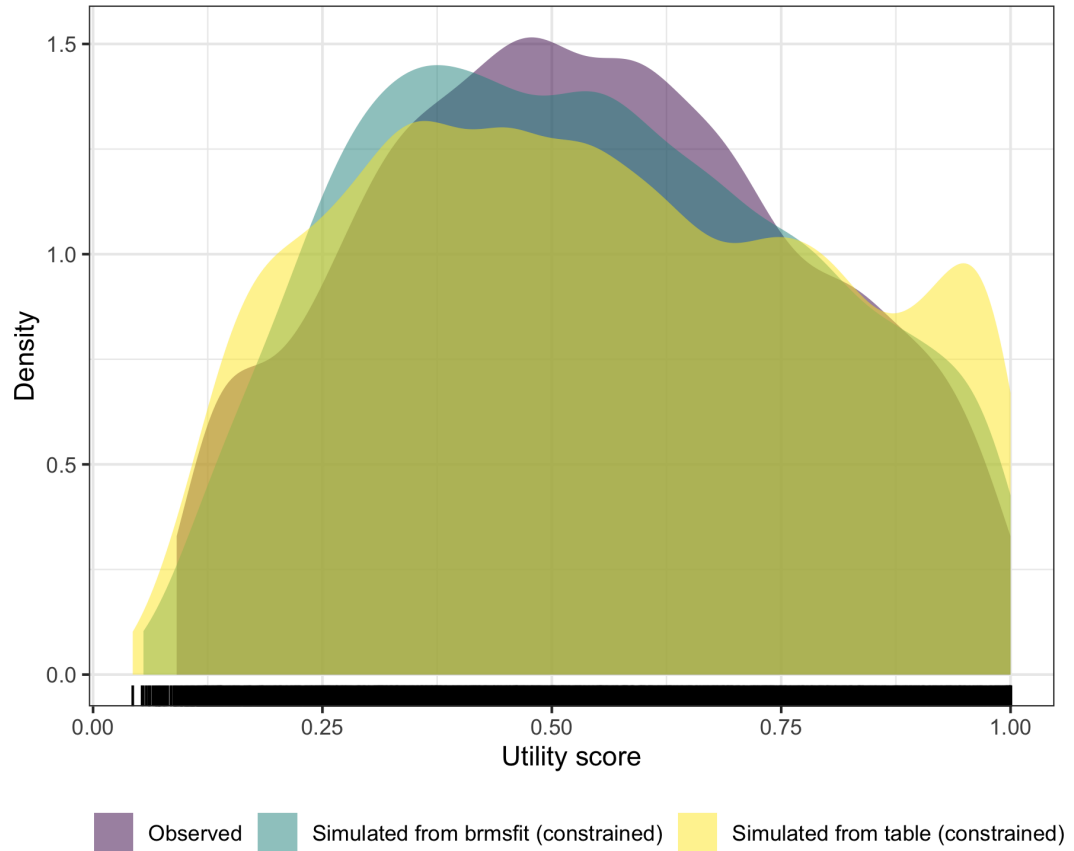


Figure 151: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

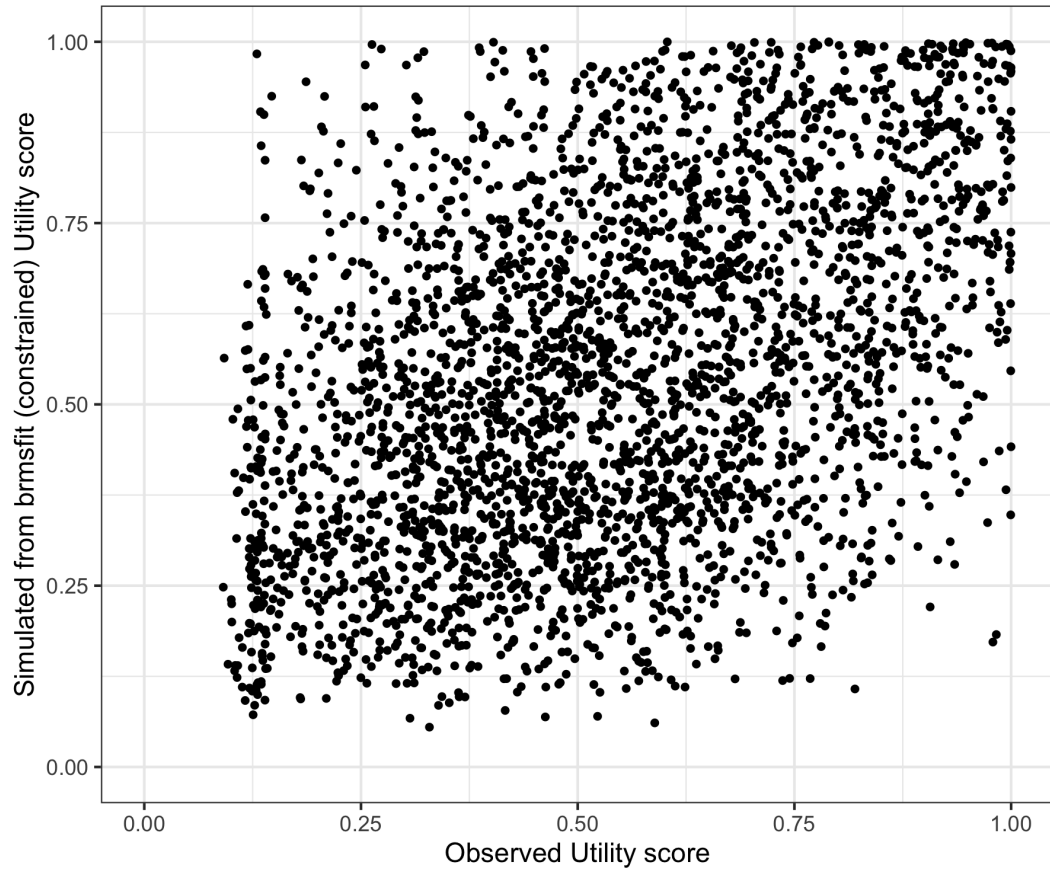


Figure 152: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

17 K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - cdaysoor (days out of role); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is K10_cdaysoor_4_GLM_GSN_LOG.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Table 33: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3898)							
sd(Intercept)	0.84	1.42	0.00	3.29	2.37	5	14
Population-Level Effects:							
Intercept	-0.16	0.69	-1.95	0.27	1.80	6	11
K10_scaled	-2.36	1.01	-3.12	-0.67	1.87	6	
cdaysoor	0.00	0.02	-0.01	0.07	1.85	6	11
dstudyingworkingBoth	-0.21	0.45	-0.99	0.08	1.59	7	9
dstudyingworkingStudy	0.37	0.56	0.02	1.32	1.59	7	
dstudyingworkingWork	-0.10	0.26	-0.53	0.07	1.63	7	5
Family Specific Parameters:							
sigma	0.17	0.04	0.16	0.18	1.98	5	4

Formula: AQOL6D ~K10_scaled + cdaysoor + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 34: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.46	0.04	0.349 , 0.5
RMSE	49.80	142.24	0.239 , 30.47

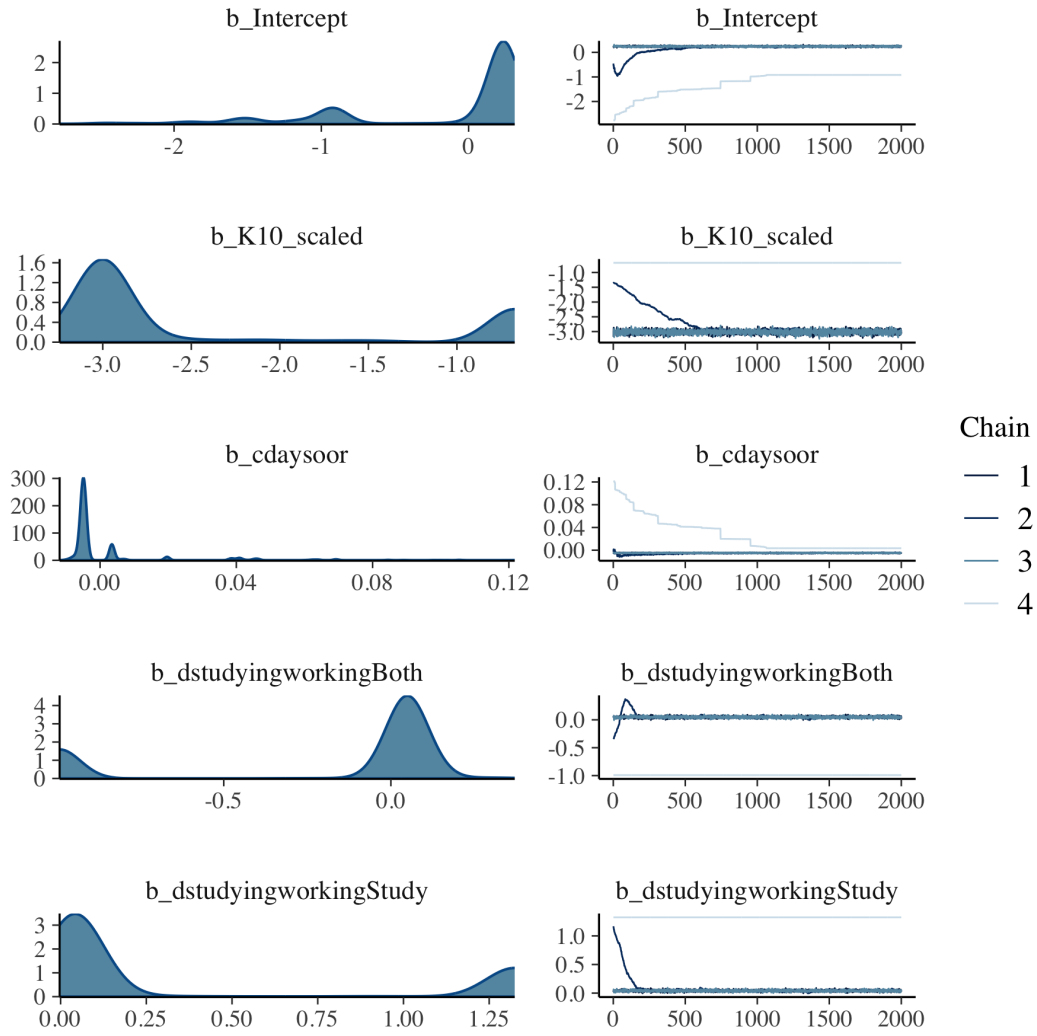


Figure 153: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link population level effects

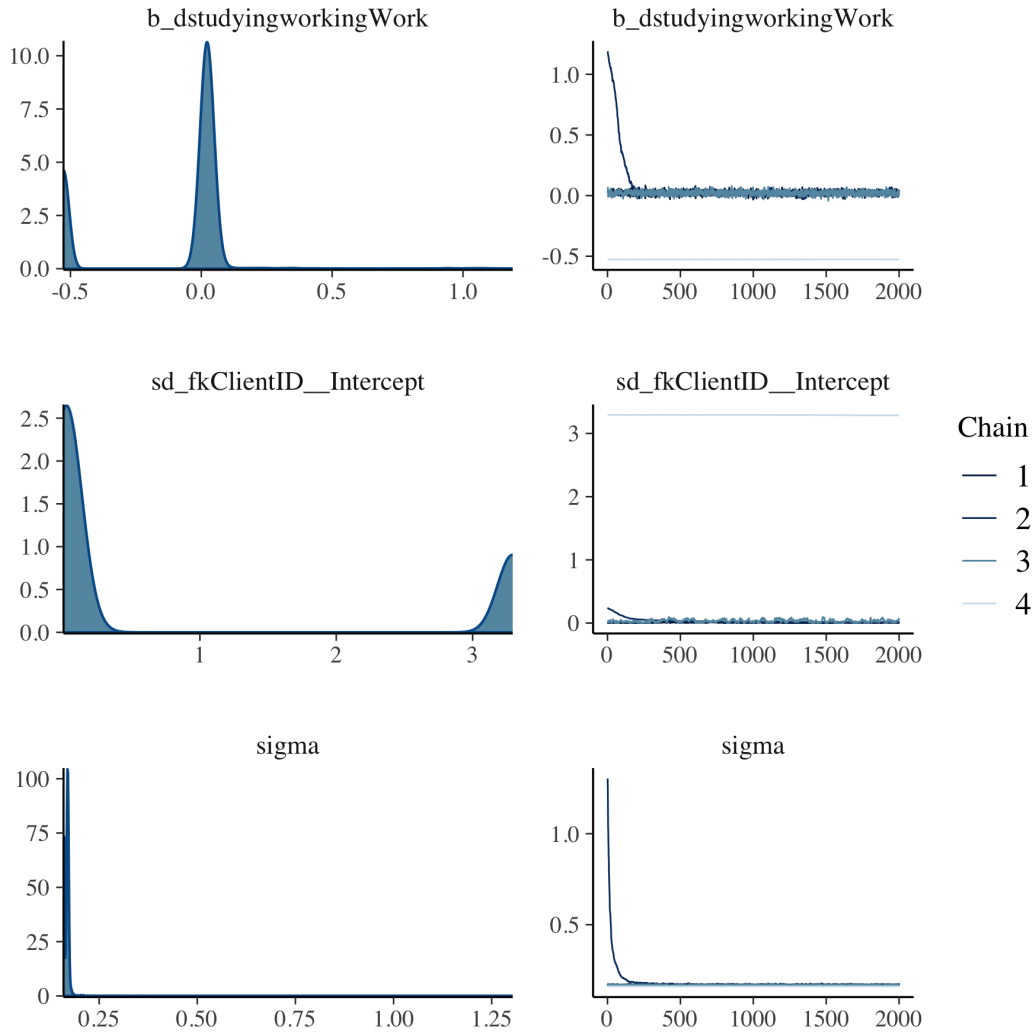


Figure 154: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link group level effects

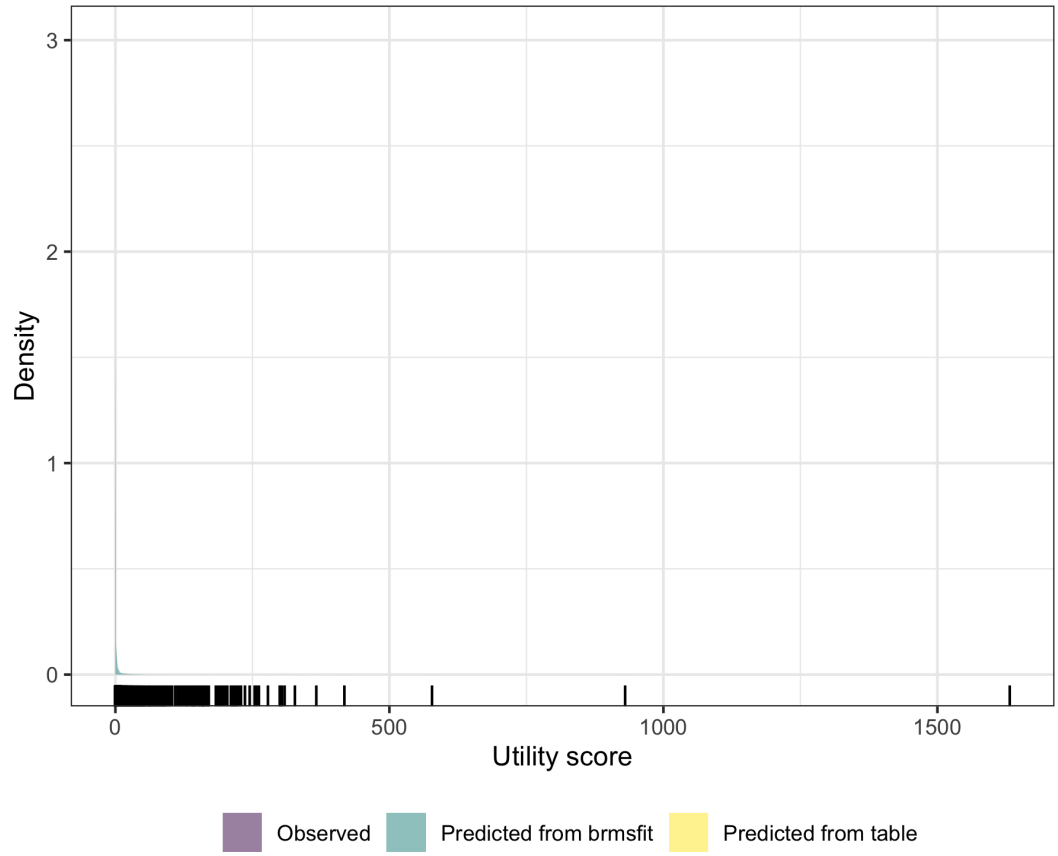


Figure 155: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

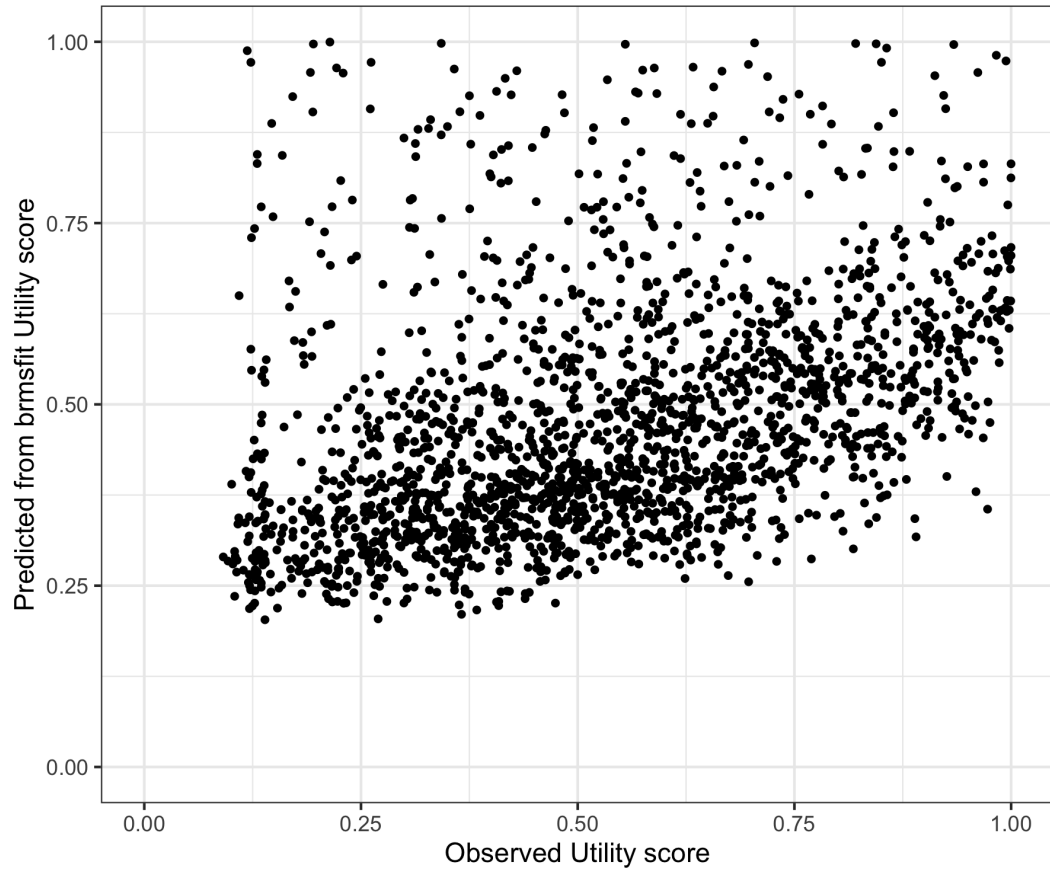


Figure 156: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

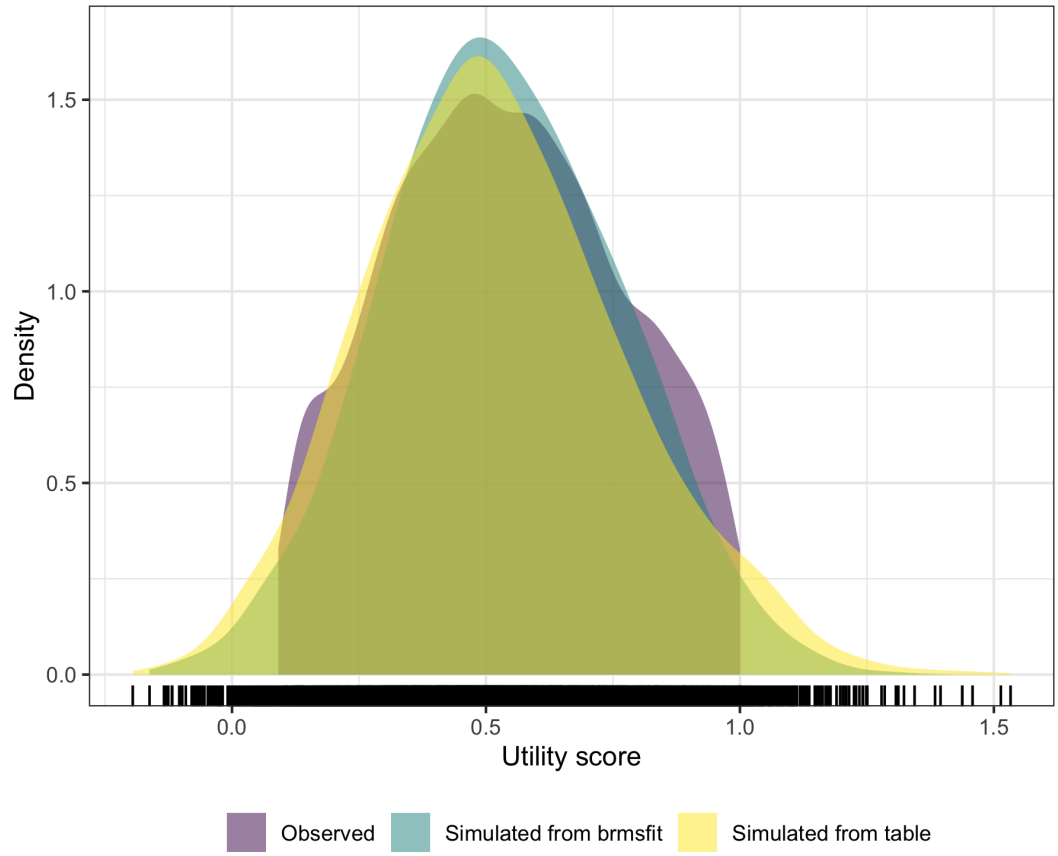


Figure 157: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

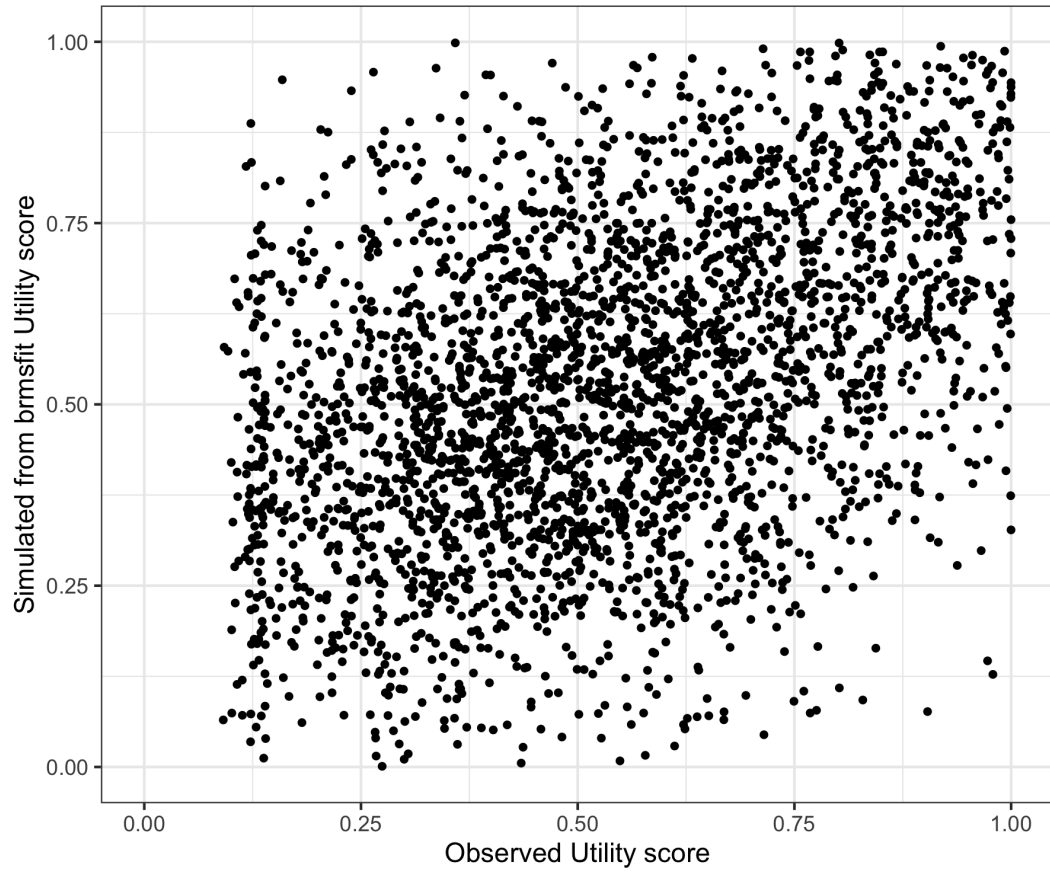


Figure 158: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

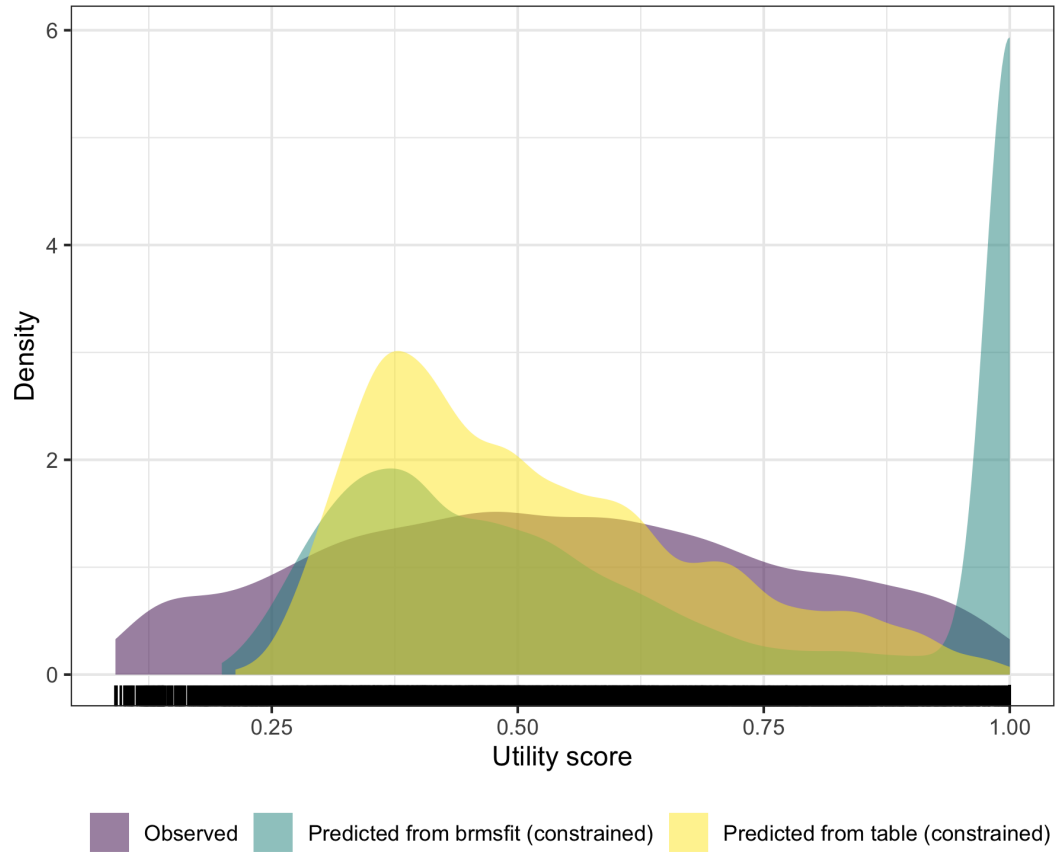


Figure 159: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

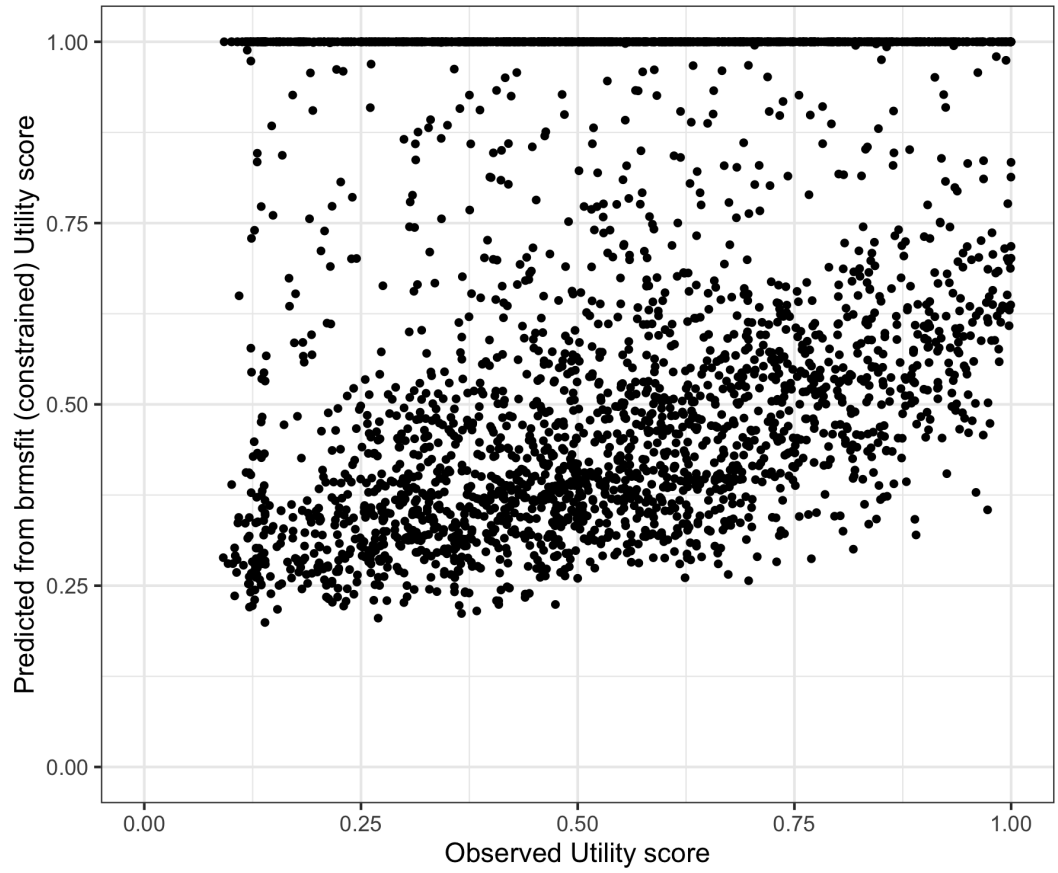


Figure 160: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

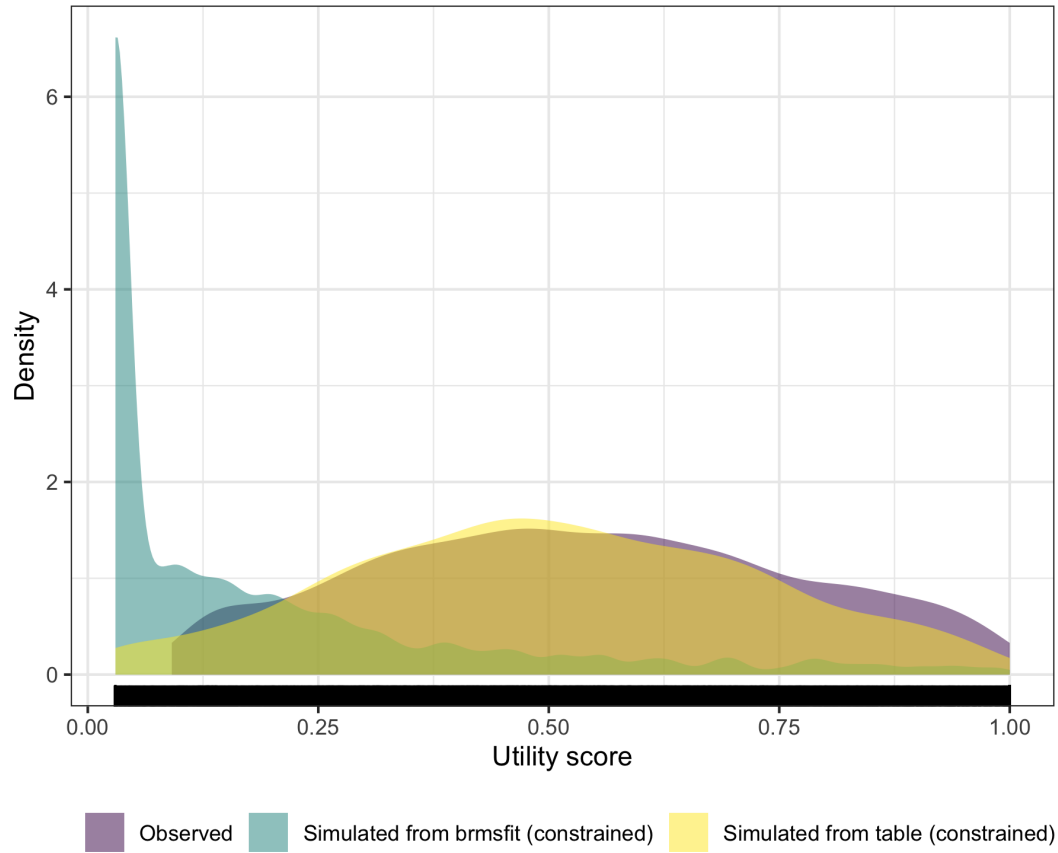


Figure 161: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

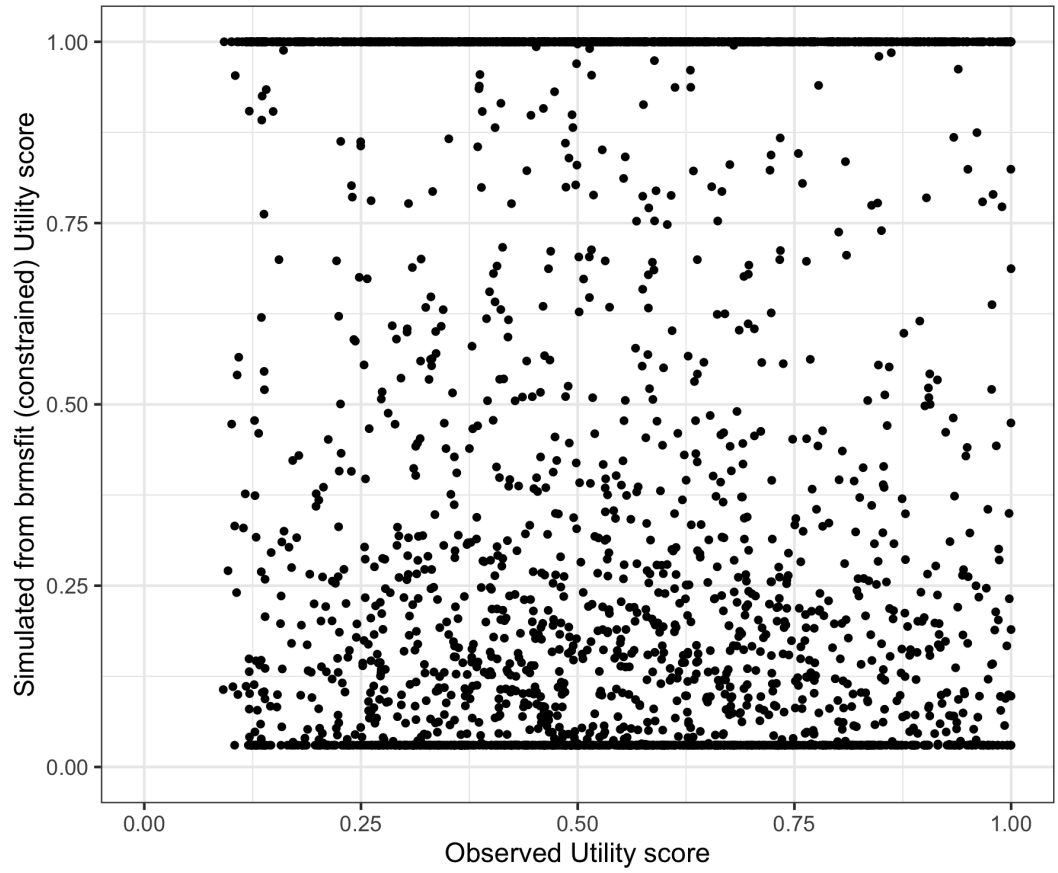


Figure 162: K10 with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

18 K10 with cdaysoor linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - cdaysoor (days out of role); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is K10_cdaysoor_4_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 41 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>.

Table 35: K10 with cdaysoor linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3898)							
sd(Intercept)	0.29	0.15	0.02	0.52	1.59	7	14
Population-Level Effects:							
Intercept	1.37	0.04	1.29	1.44	1.00	6 503	6 333
K10_scaled	-5.63	0.12	-5.87	-5.39	1.00	7 126	5 887
cdaysoor	-0.01	0.00	-0.01	-0.01	1.00	6 240	5 911
dstudyingworkingBoth	0.11	0.03	0.05	0.16	1.00	4 505	5 788
dstudyingworkingStudy	0.08	0.03	0.03	0.13	1.00	4 013	5 632
dstudyingworkingWork	0.05	0.03	-0.01	0.11	1.00	4 568	5 192
Family Specific Parameters:							
sigma	0.49	0.09	0.29	0.60	1.58	7	13

Formula: AQOL6D_CLL ~K10_scaled + cdaysoor + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 36: K10 with cdaysoor linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.60	0.14	0.434 , 0.863
RMSE	1.08	0.02	1.06 , 1.101

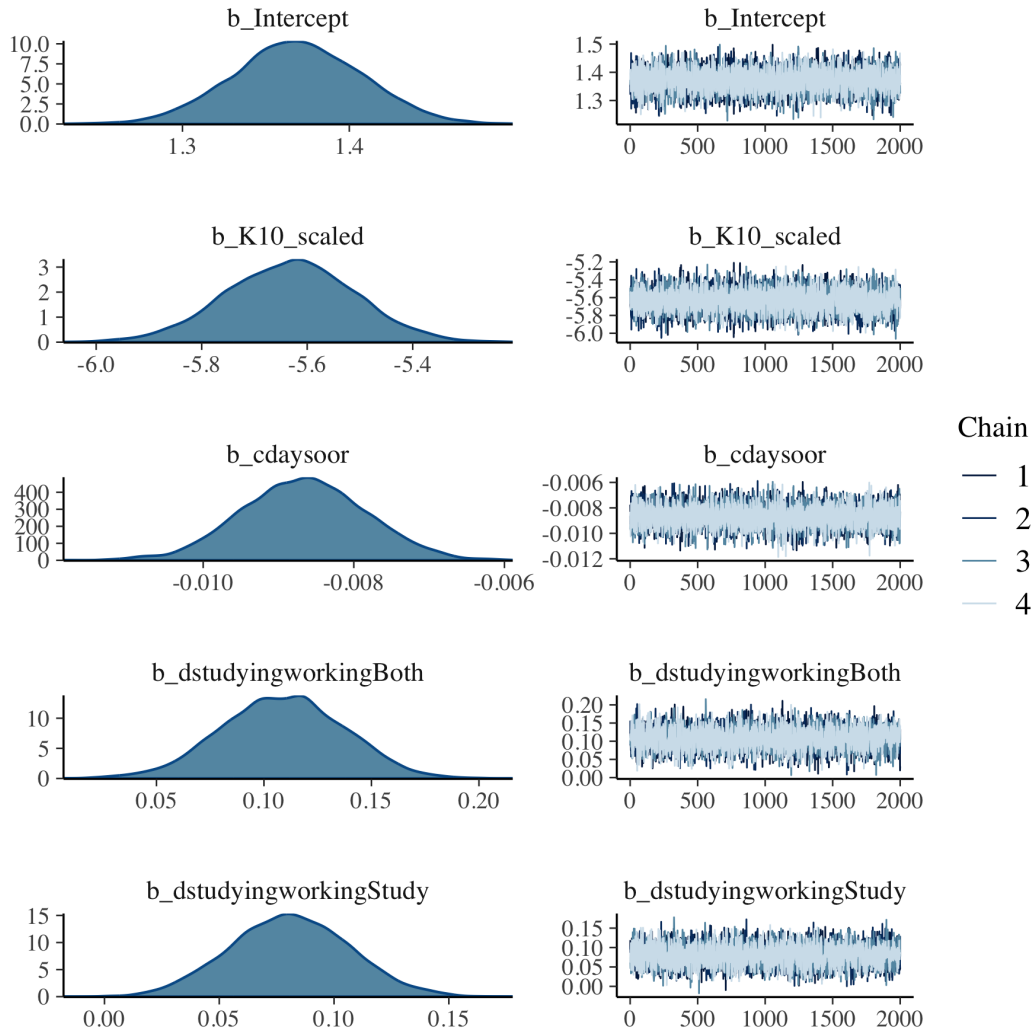


Figure 163: K10 with cdaysoor linear mixed model with complementary log log transformation population level effects

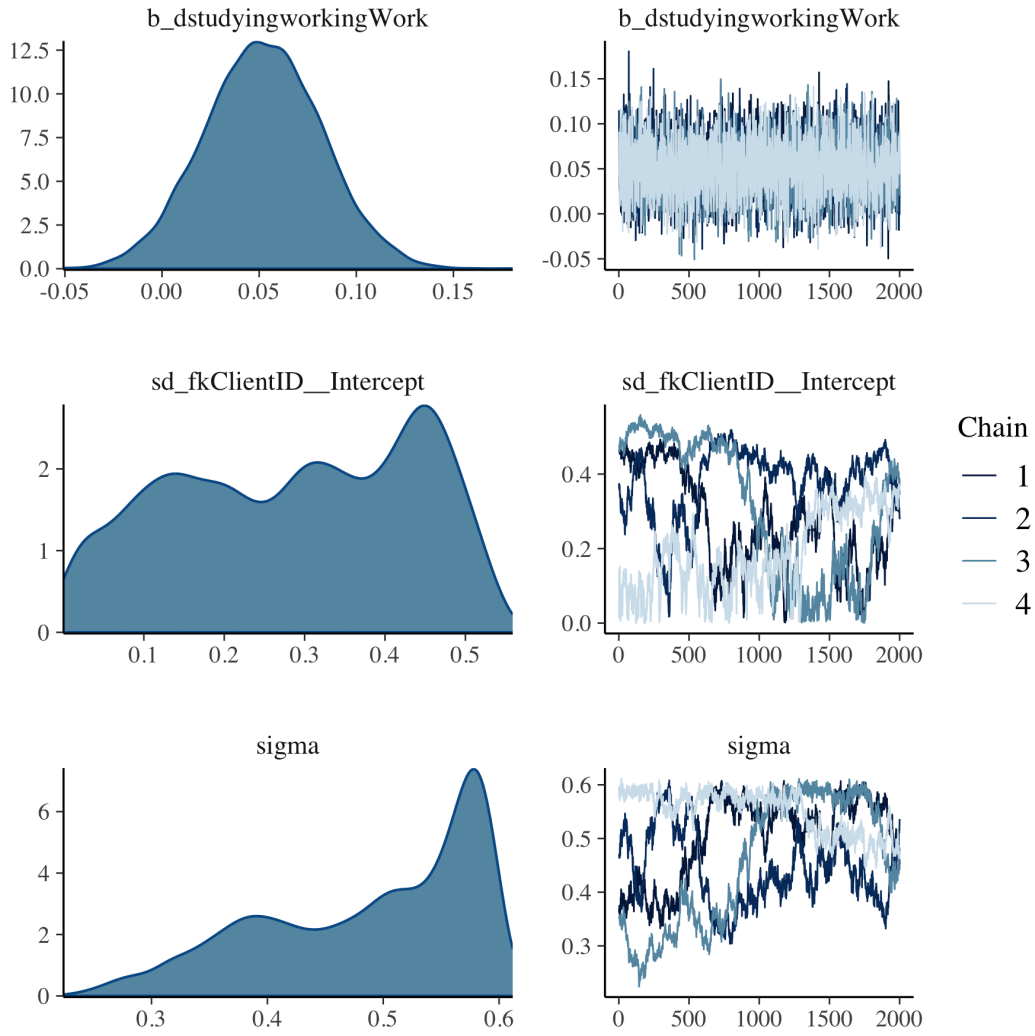


Figure 164: K10 with cdaysoor linear mixed model with complementary log log transformation group level effects

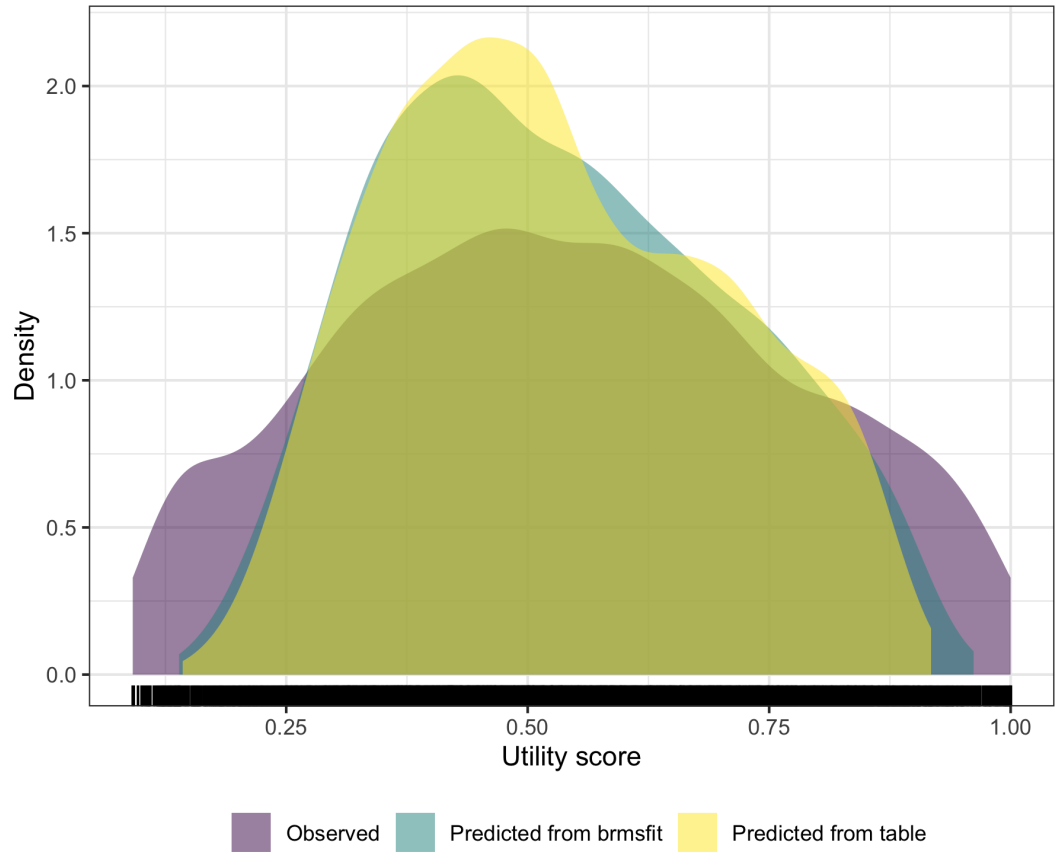


Figure 165: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

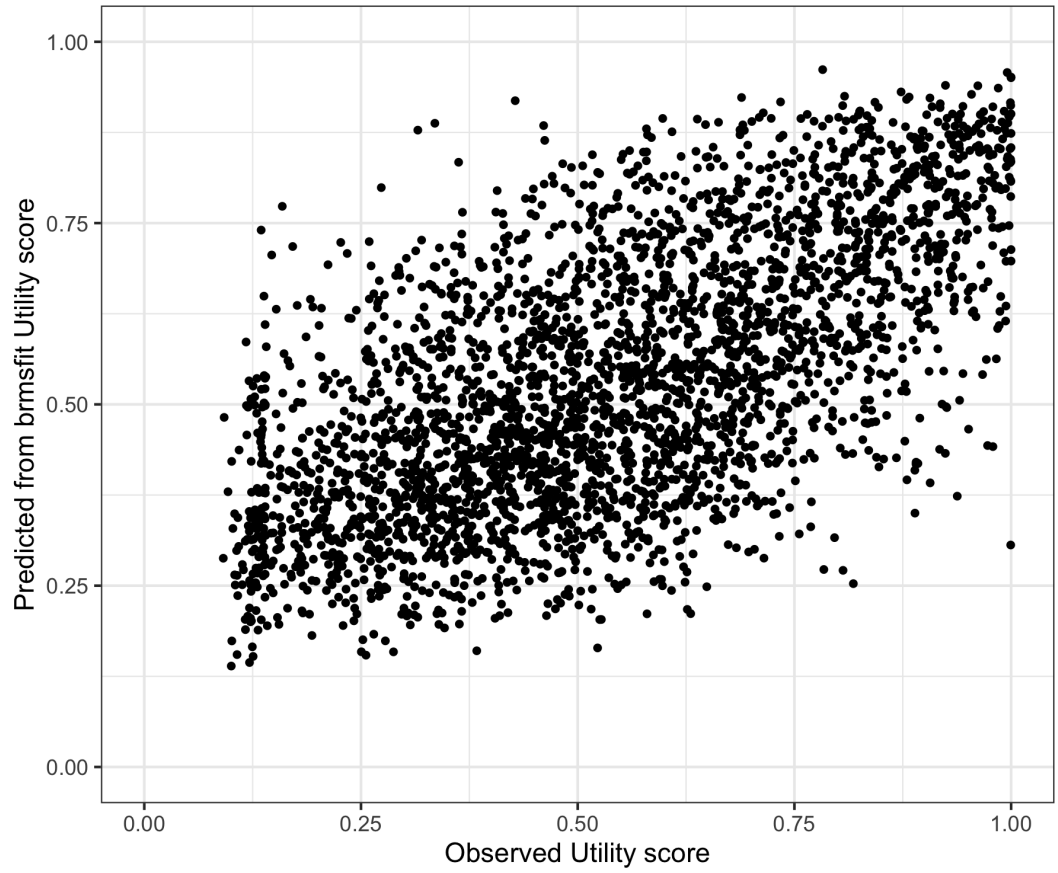


Figure 166: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

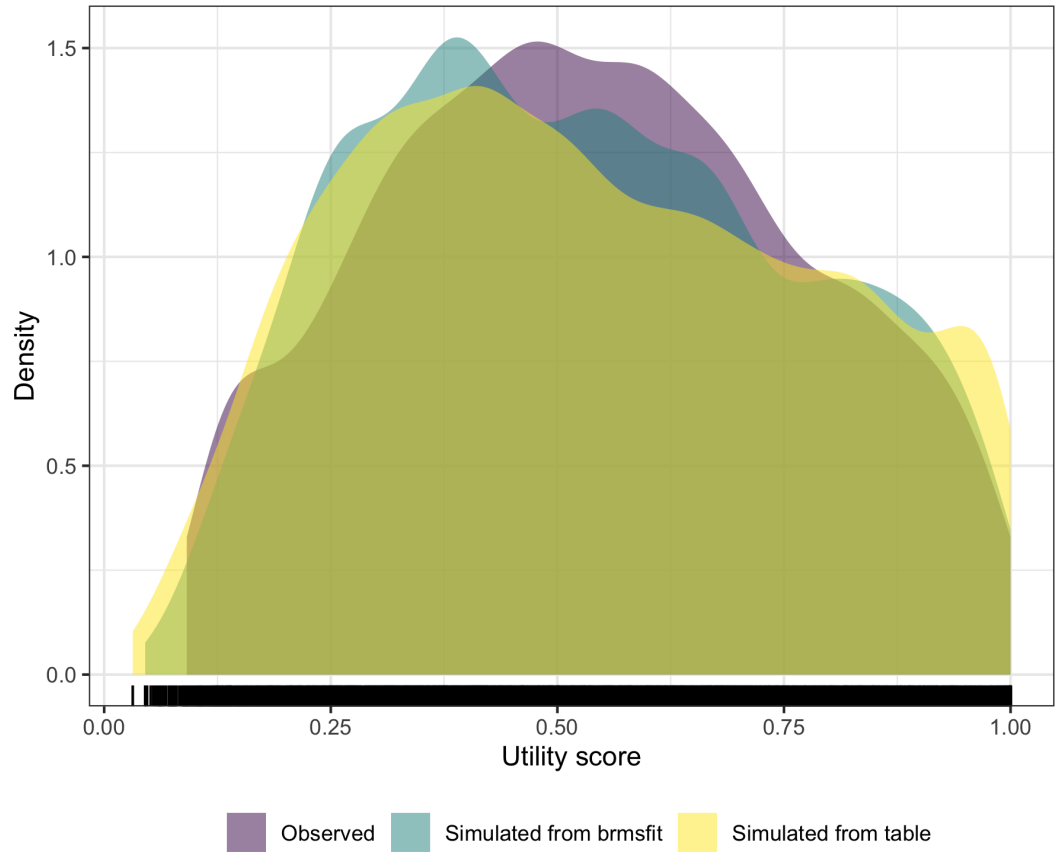


Figure 167: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

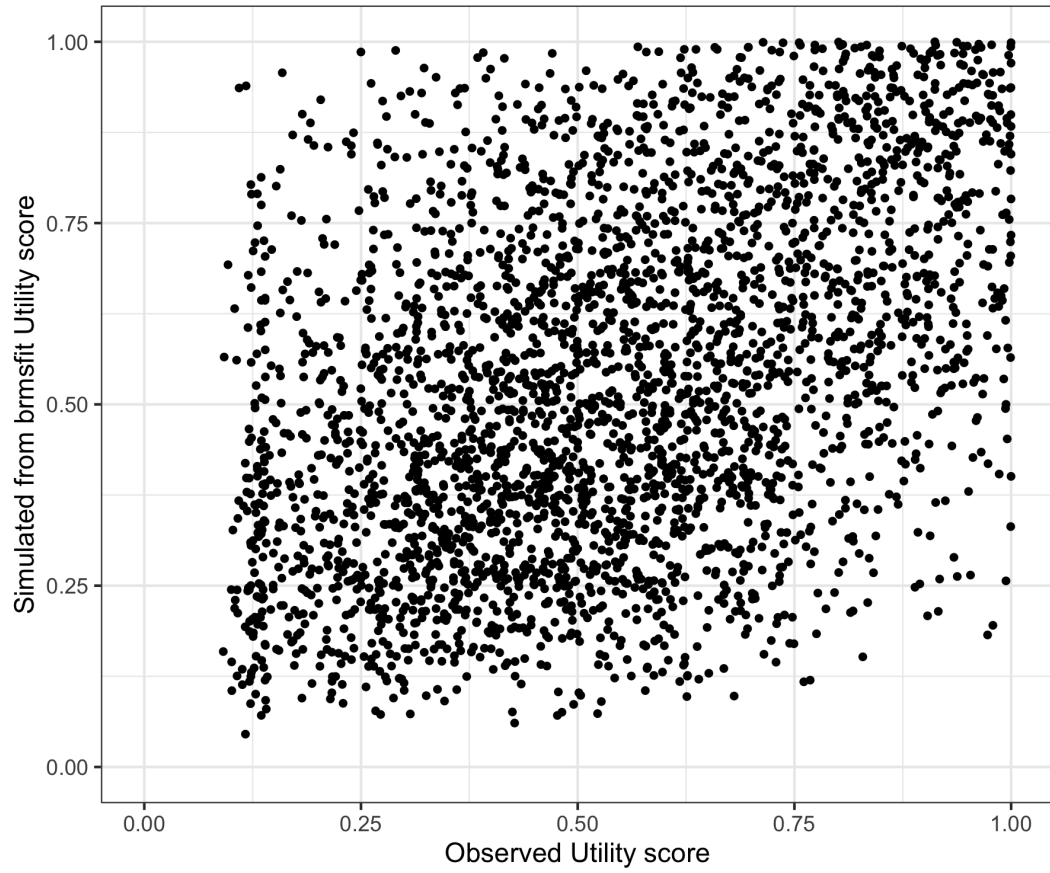


Figure 168: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

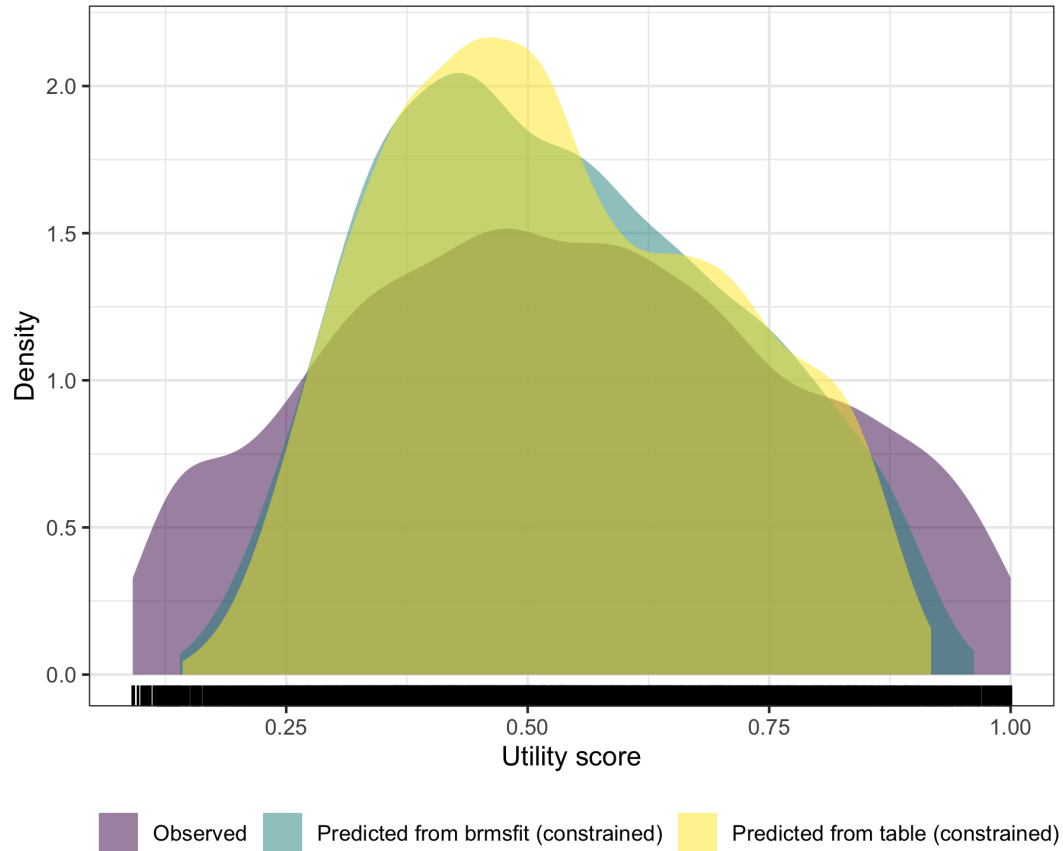


Figure 169: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

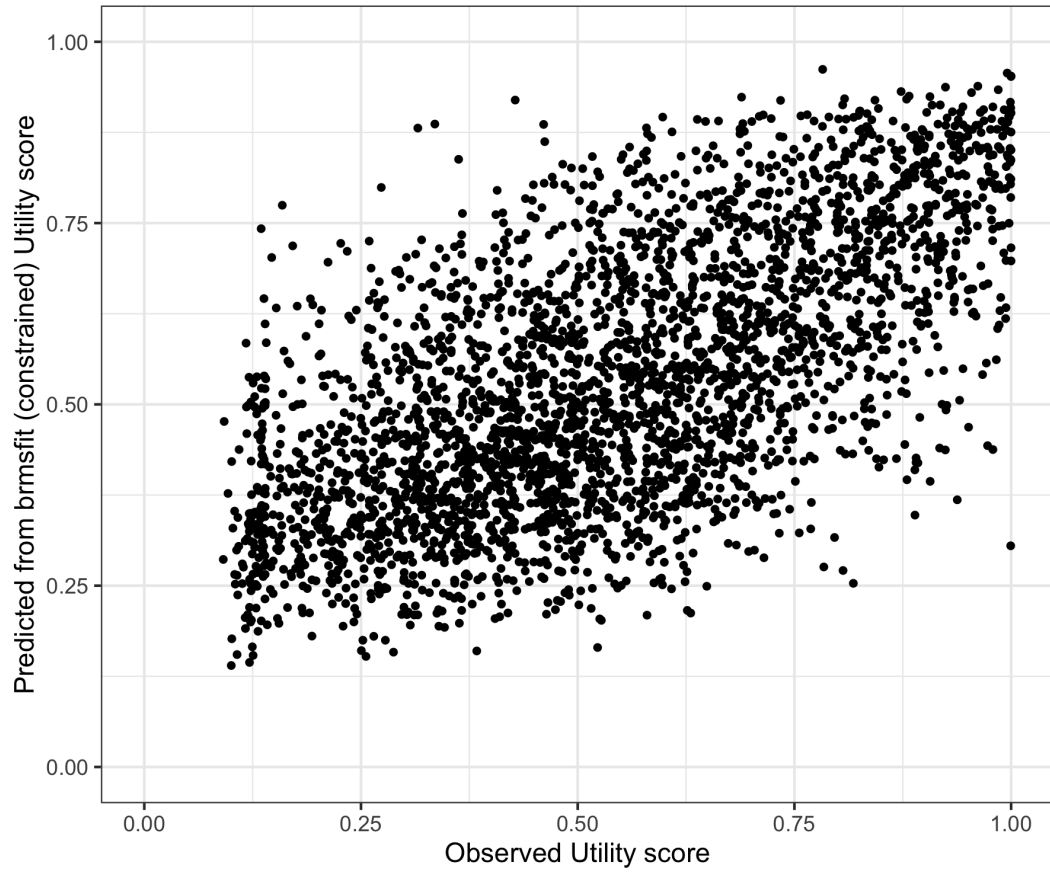


Figure 170: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

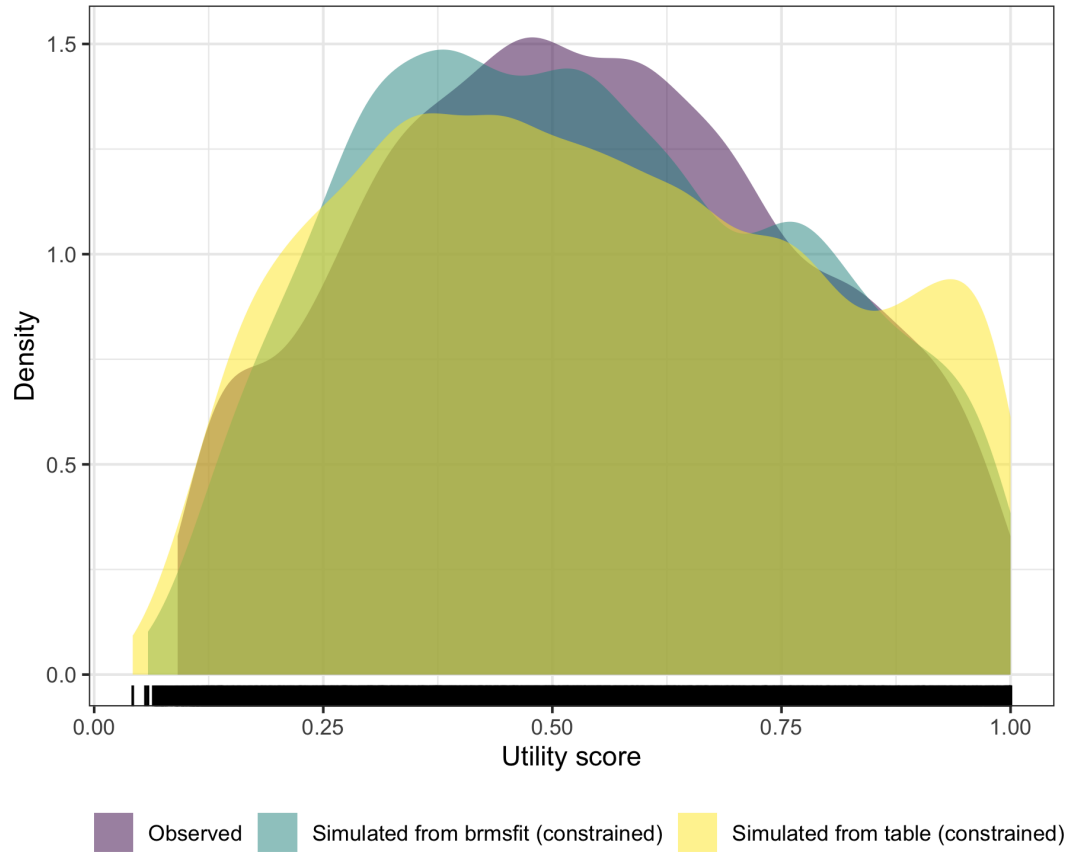


Figure 171: K10 with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

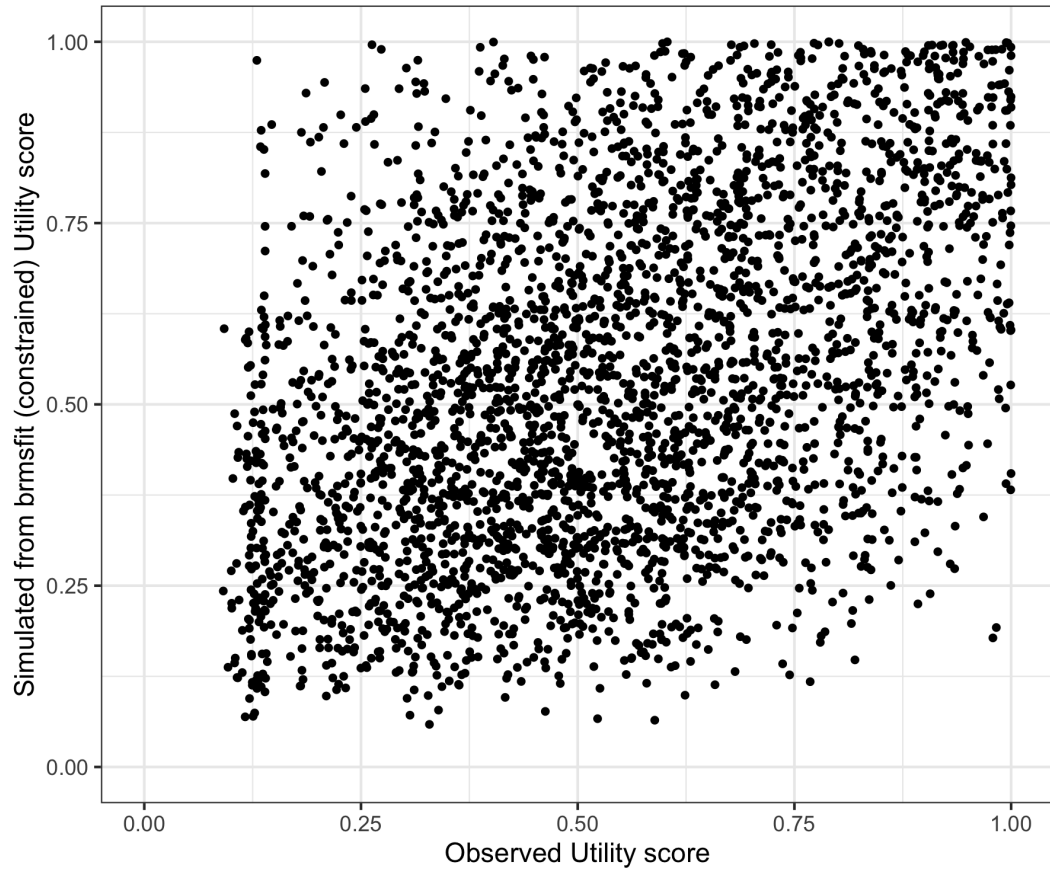


Figure 172: K10 with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

19 K10 with dage generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - dage (age); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is K10_dage_2_GLM_GSN_LOG.

Table 37: K10 with dage generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3996)							
sd(Intercept)	0.04	0.02	0.00	0.08	1.01	533	893
Population-Level Effects:							
Intercept	0.34	0.03	0.29	0.39	1.00	10 043	5 702
K10_scaled	-3.23	0.06	-3.35	-3.11	1.00	13 037	5 991
dage	-0.01	0.00	-0.01	-0.00	1.00	9 734	5 983
dgenderMale	0.03	0.01	0.01	0.05	1.00	15 428	5 569
dgenderOther	-0.00	0.04	-0.08	0.07	1.00	14 092	5 488
Family Specific Parameters:							
sigma	0.17	0.00	0.17	0.18	1.00	1 182	1 265

Formula: AQOL6D ~K10_scaled + dage + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 38: K10 with dage generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.44	0.01	0.418 , 0.472
RMSE	0.24	0.00	0.239 , 0.244

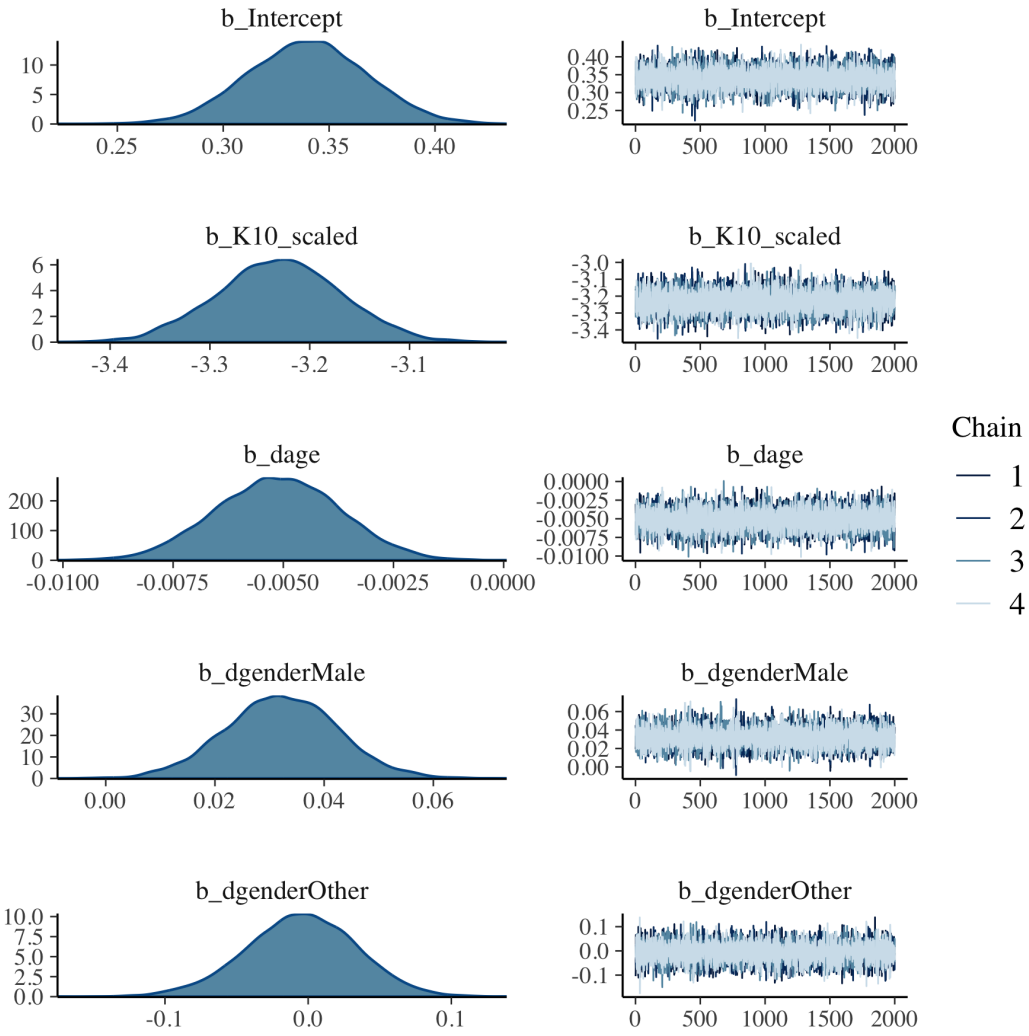


Figure 173: K10 with dage generalised linear mixed model with Gaussian distribution and log link population level effects

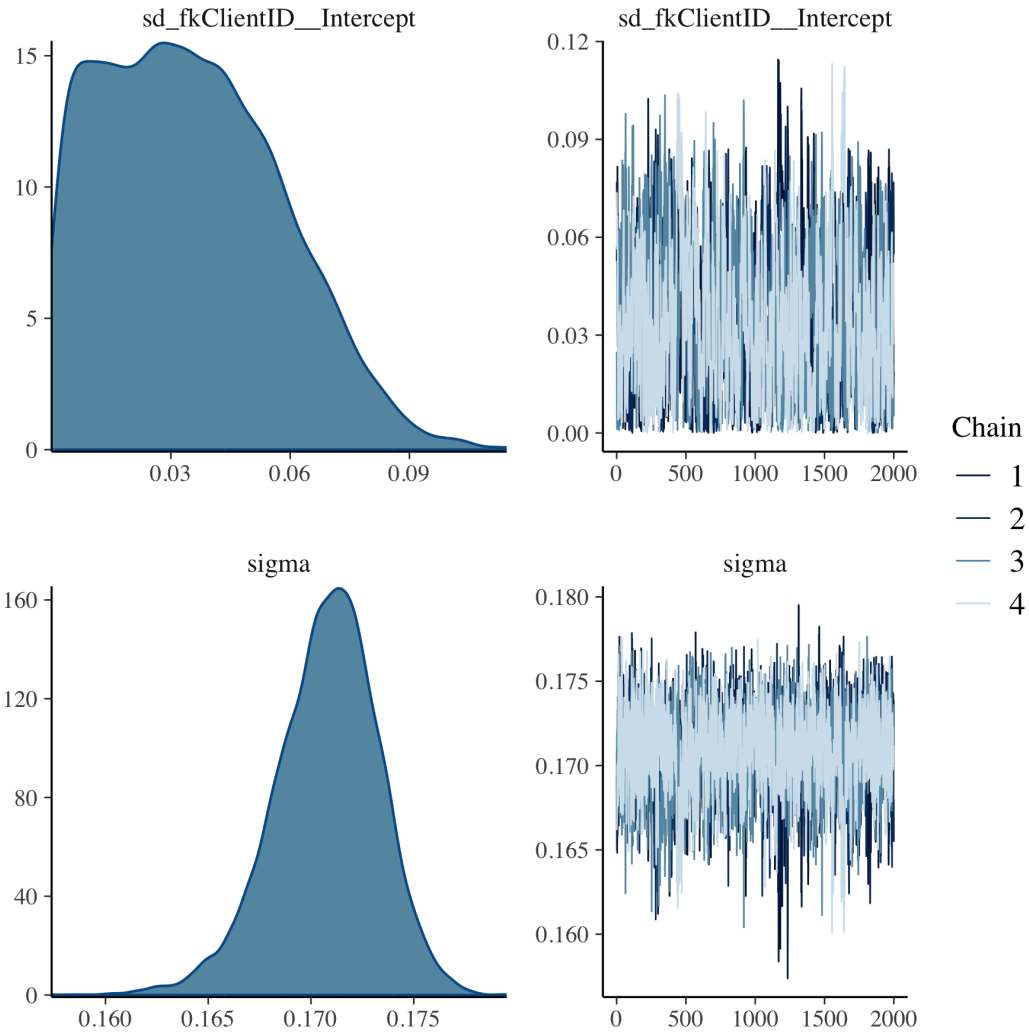


Figure 174: K10 with dage generalised linear mixed model with Gaussian distribution and log link group level effects

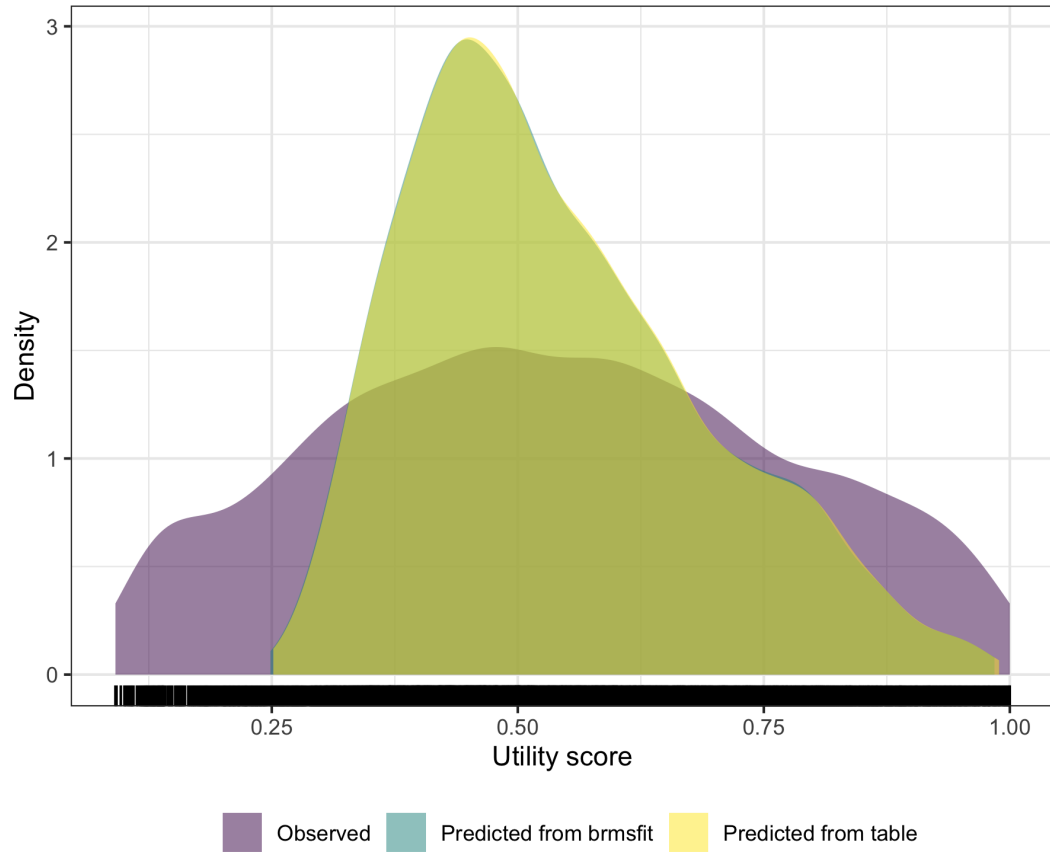


Figure 175: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

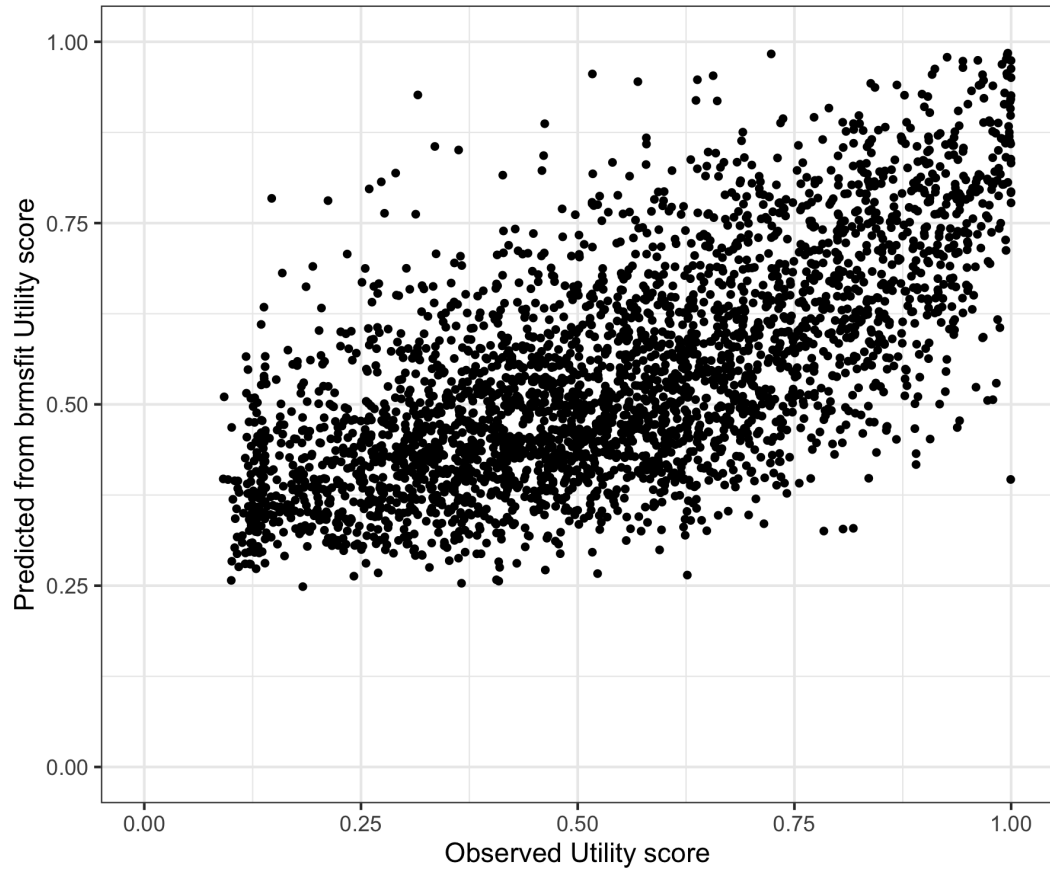


Figure 176: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

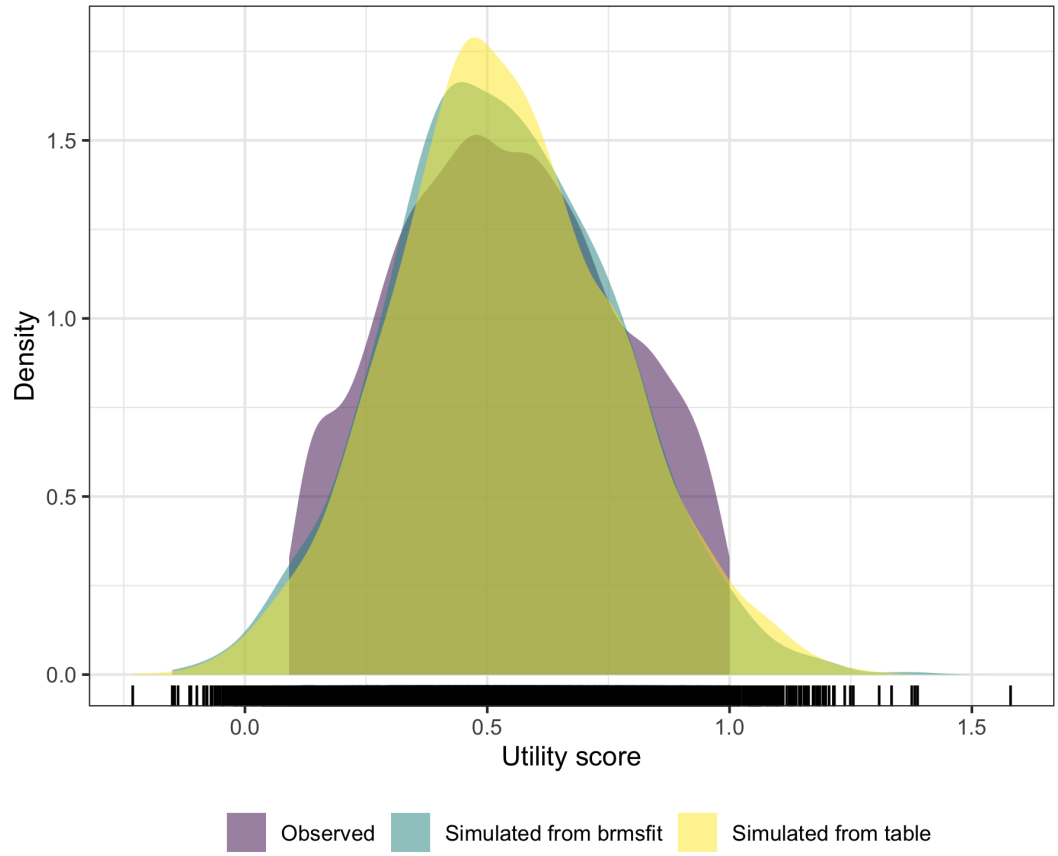


Figure 177: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

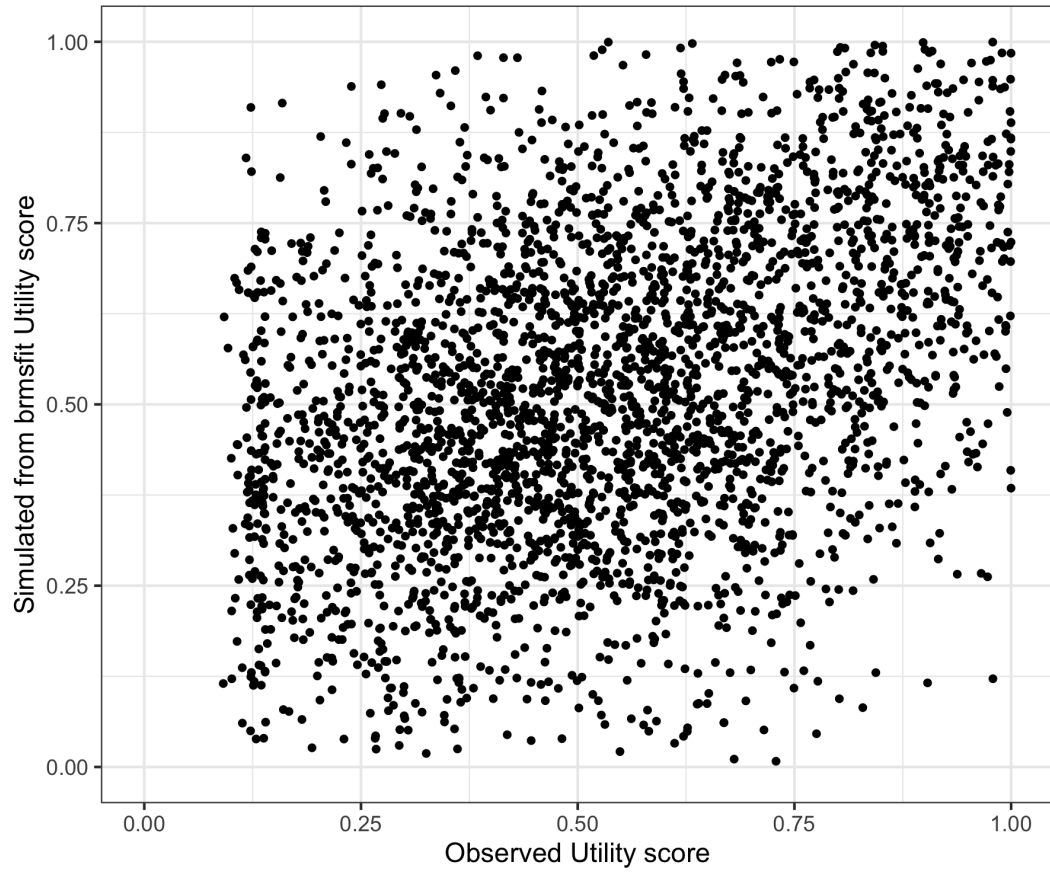
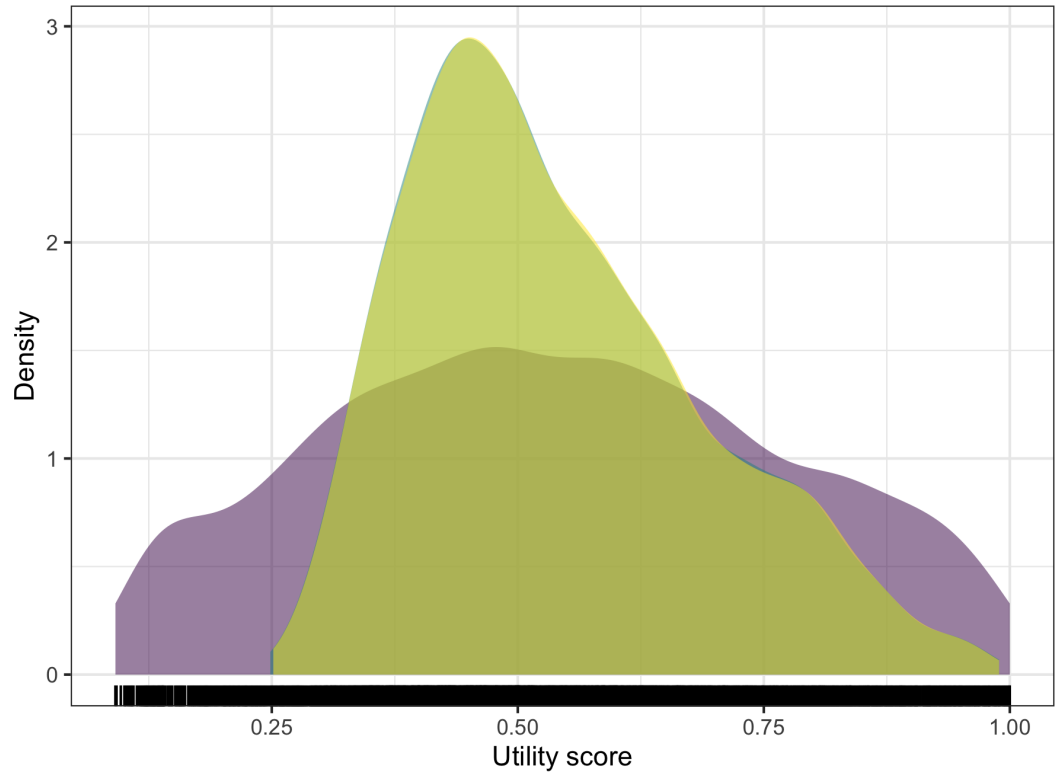


Figure 178: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values



Observed
 Predicted from brmsfit (constrained)
 Predicted from table (constrained)

Figure 179: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

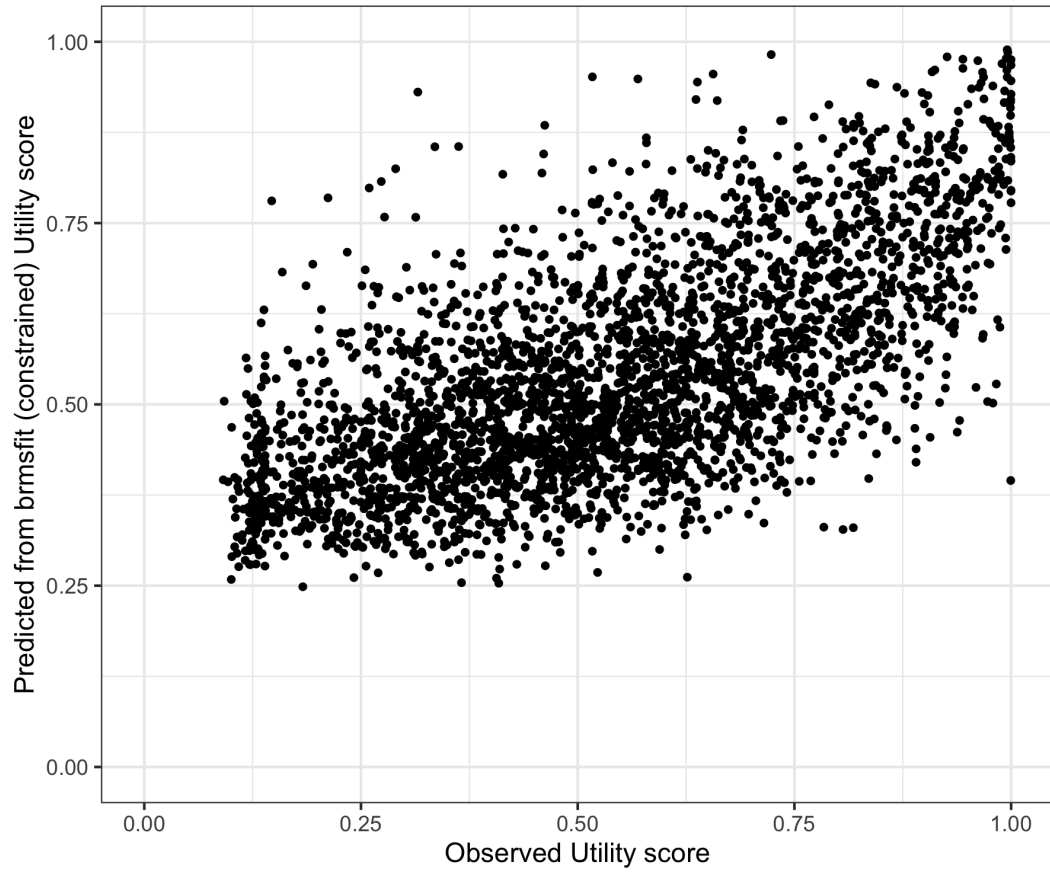


Figure 180: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

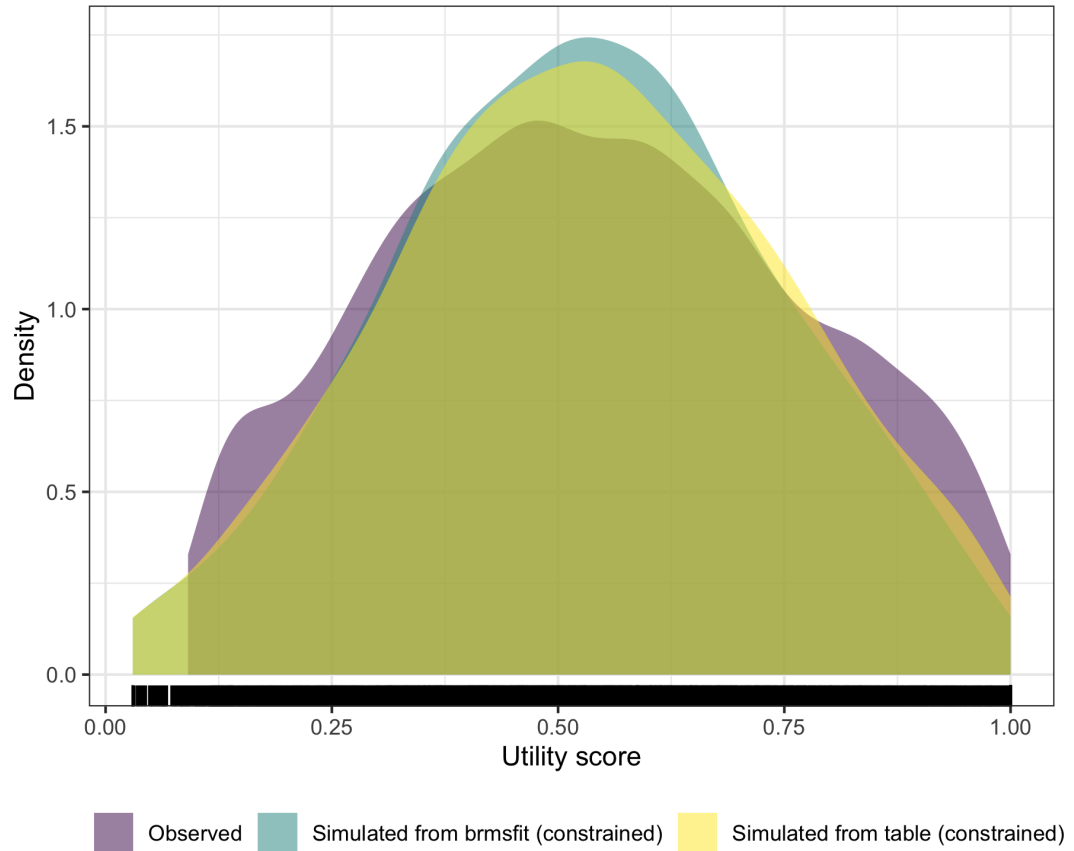


Figure 181: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

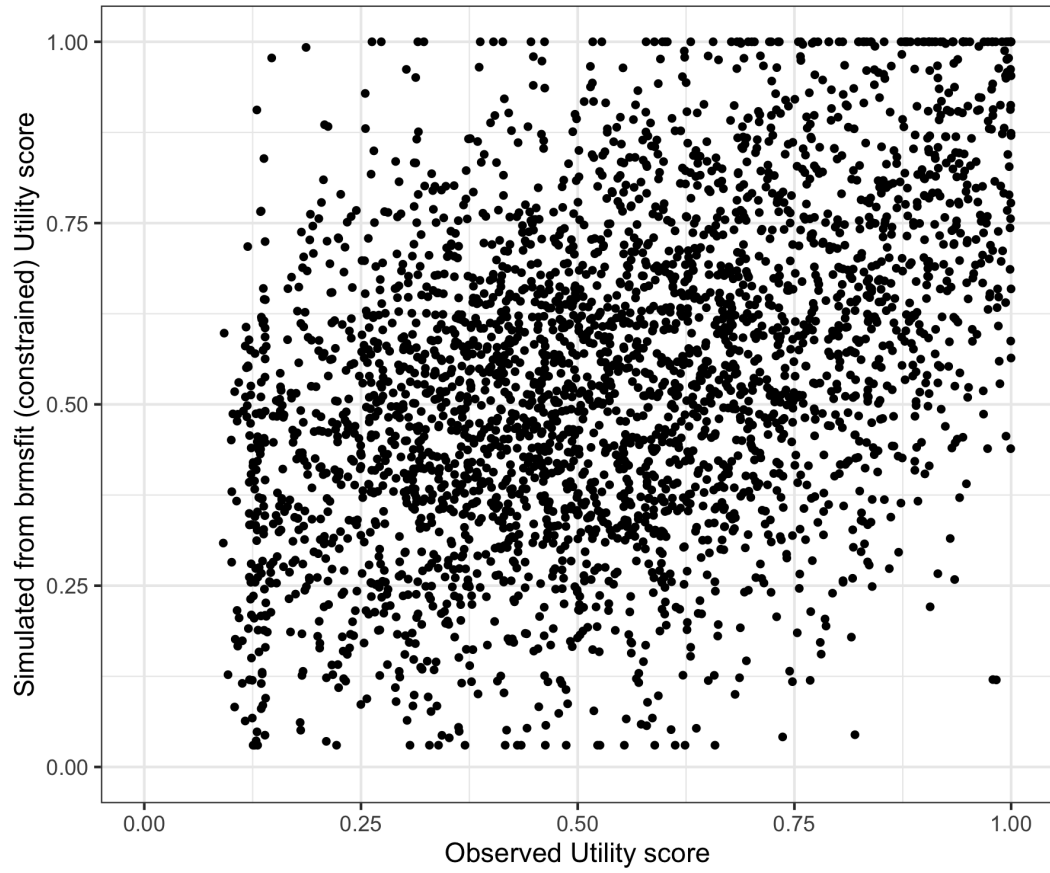


Figure 182: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

20 K10 with dage linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - dage (age); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is K10_dage_2_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 39: K10 with dage linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3996)							
sd(Intercept)	0.39	0.16	0.04	0.57	2.05	5	23
Population-Level Effects:							
Intercept	1.64	0.06	1.53	1.75	1.00	2 585	4 391
K10_scaled	-5.99	0.12	-6.22	-5.77	1.00	1 976	2 740
dage	-0.02	0.00	-0.02	-0.01	1.00	2 962	4 217
dgenderMale	0.08	0.02	0.04	0.11	1.00	2 308	3 192
dgenderOther	-0.01	0.06	-0.13	0.12	1.00	2 536	3 894
Family Specific Parameters:							
sigma	0.40	0.13	0.18	0.60	2.06	5	24

Formula: AQOL6D_CLL ~K10_scaled + dage + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 40: K10 with dage linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.71	0.17	0.425 , 0.947
RMSE	1.06	0.03	1.038 , 1.088

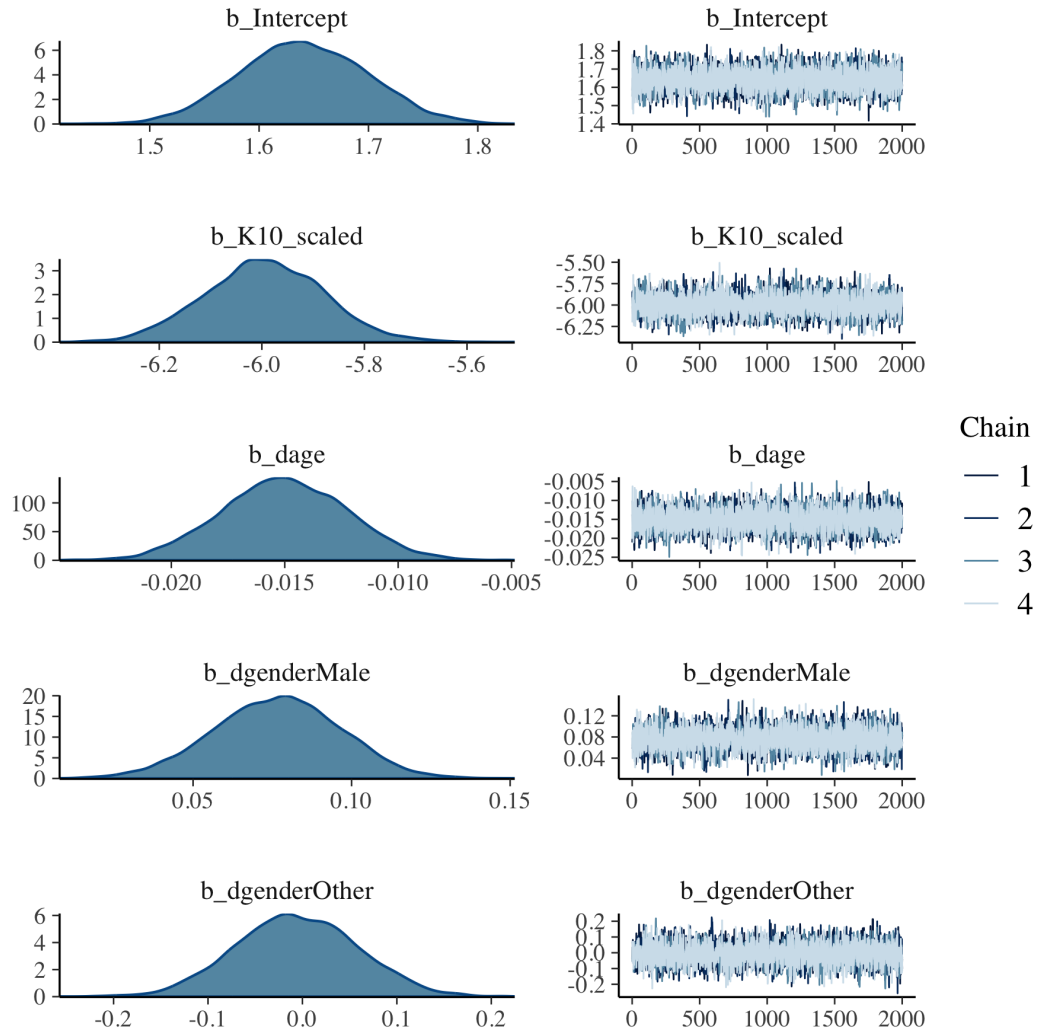


Figure 183: K10 with dage linear mixed model with complementary log log transformation population level effects

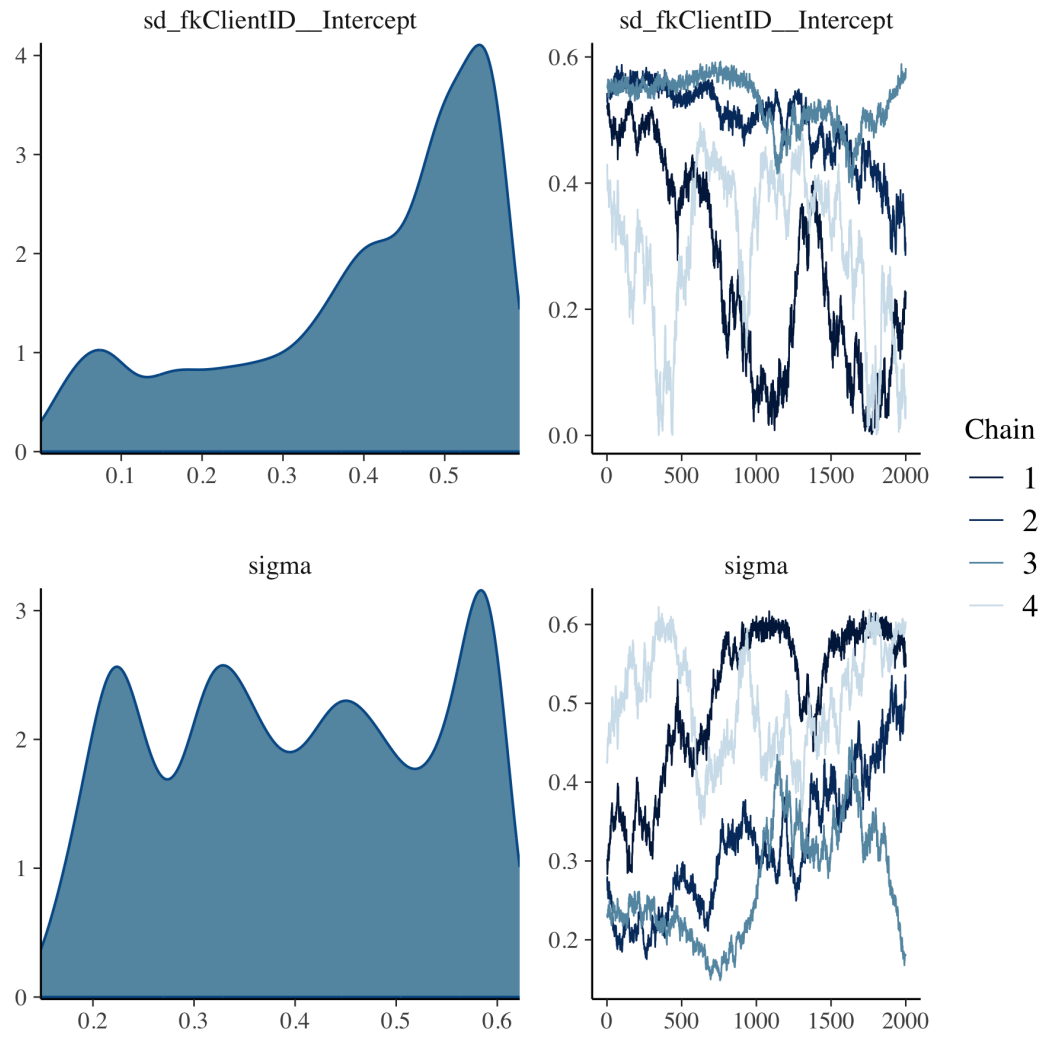


Figure 184: K10 with dage linear mixed model with complementary log log transformation group level effects

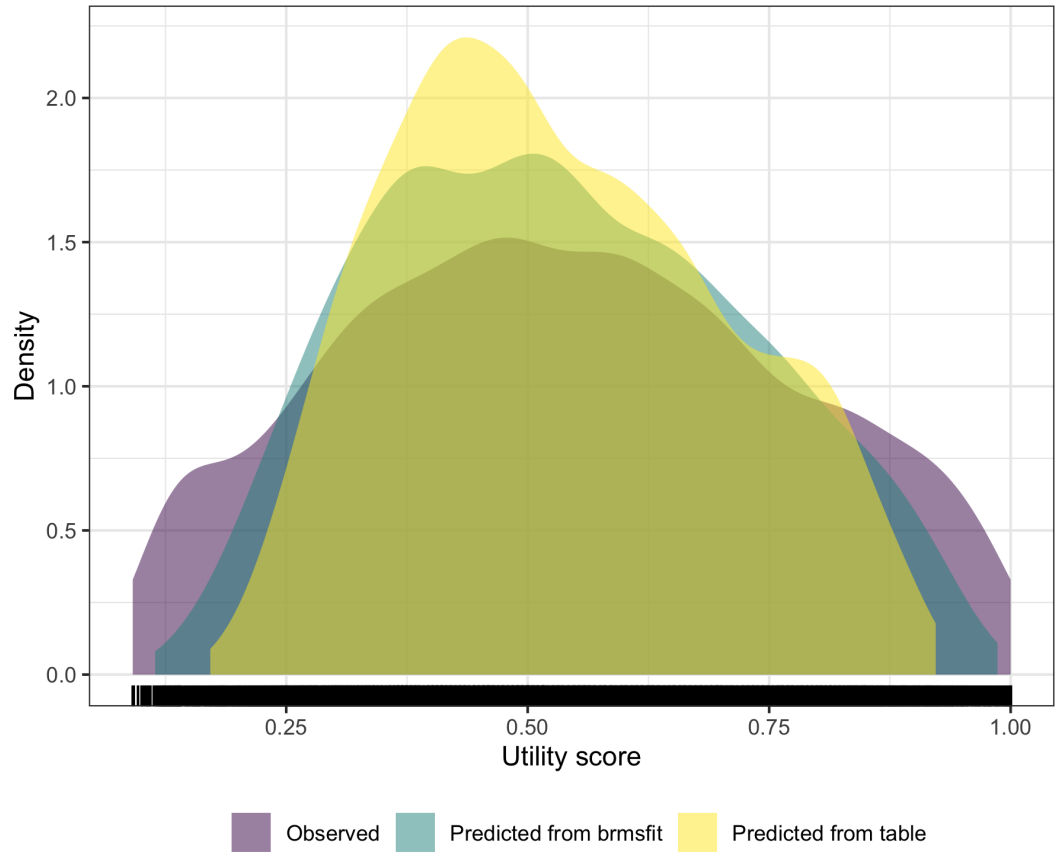


Figure 185: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

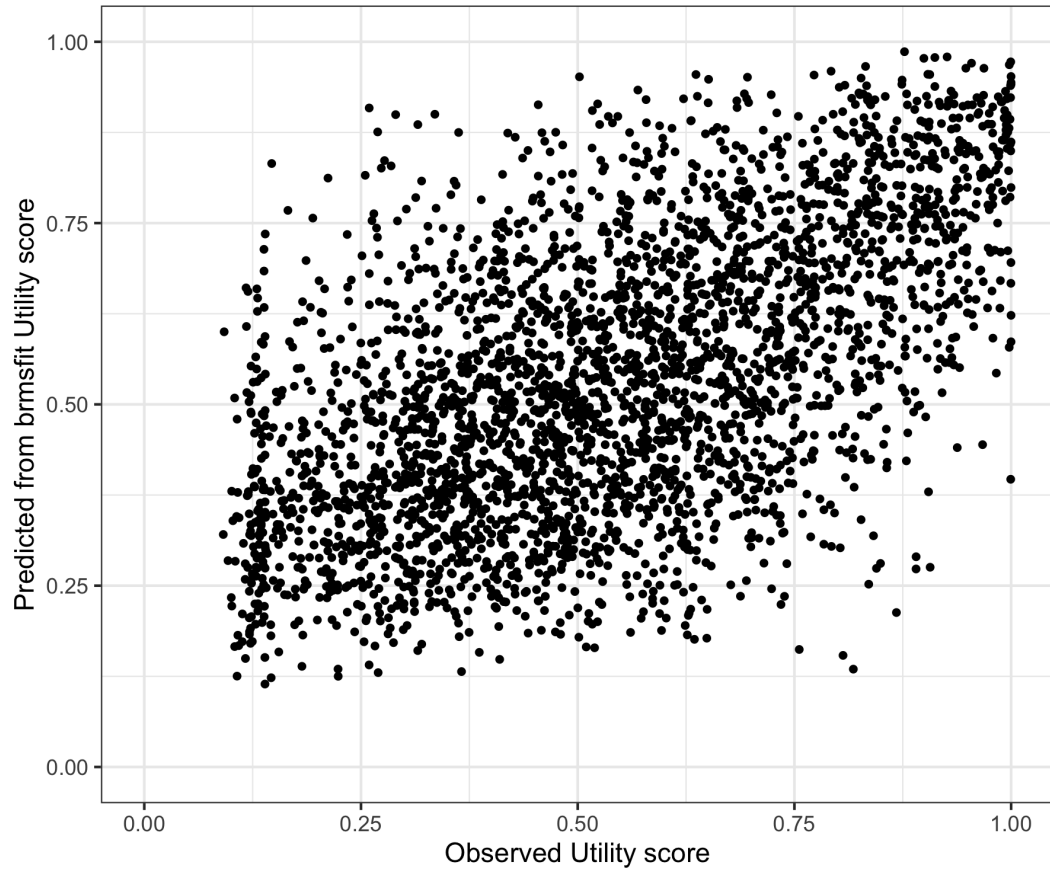


Figure 186: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

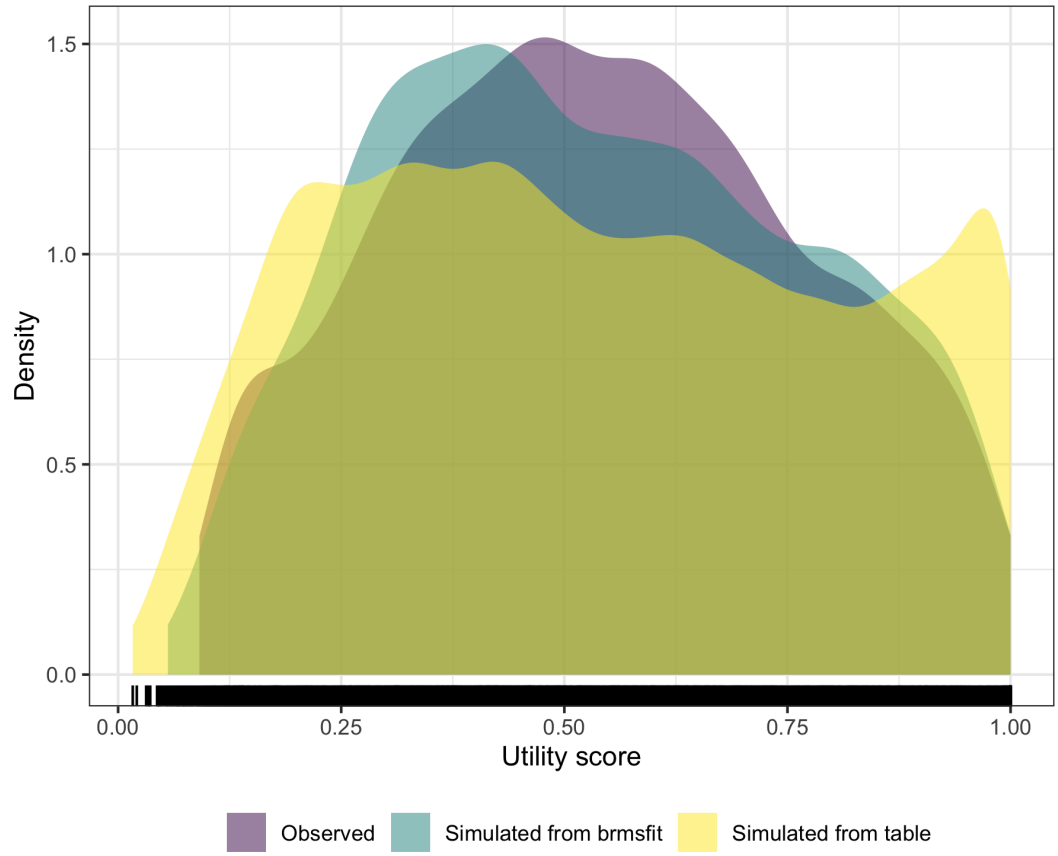


Figure 187: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

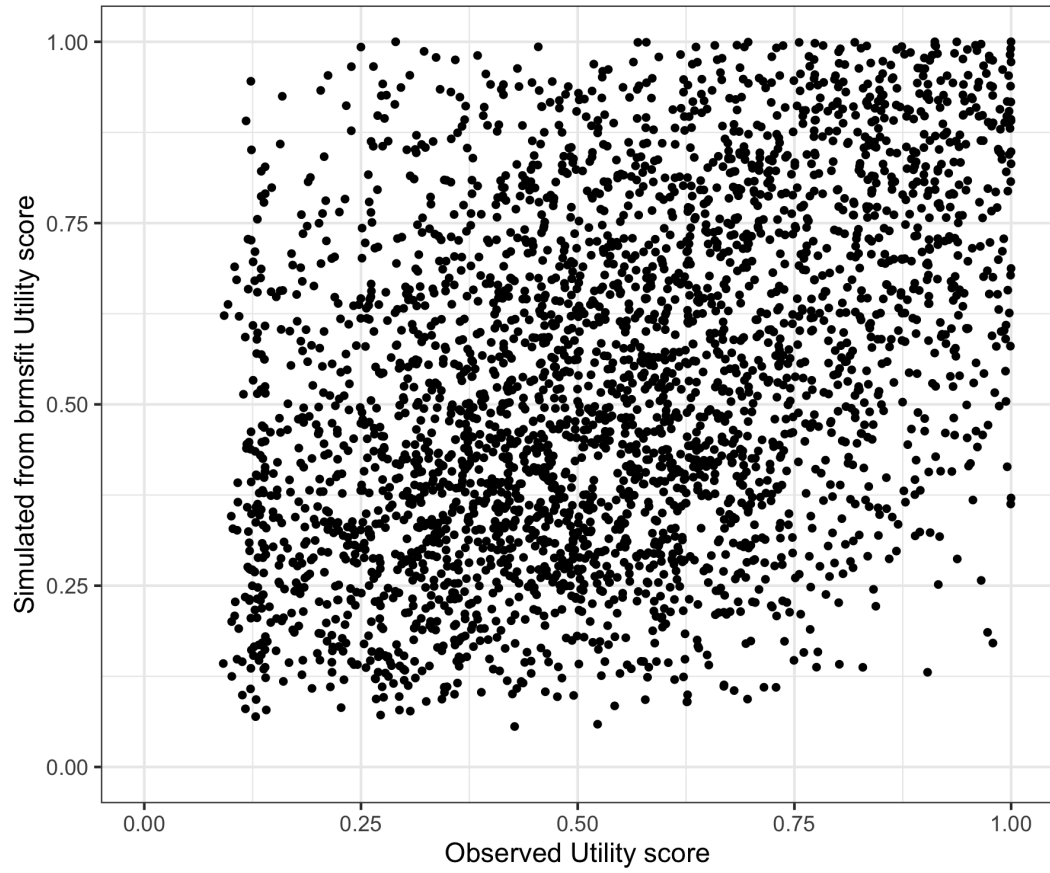


Figure 188: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

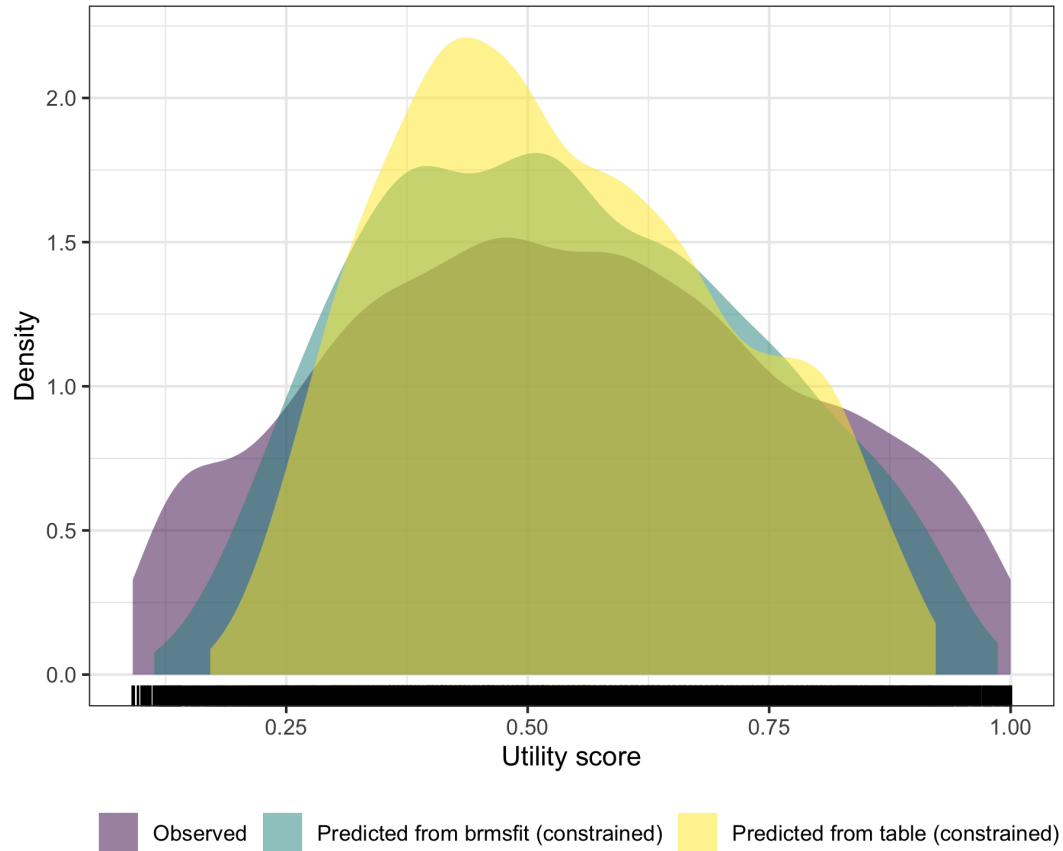


Figure 189: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

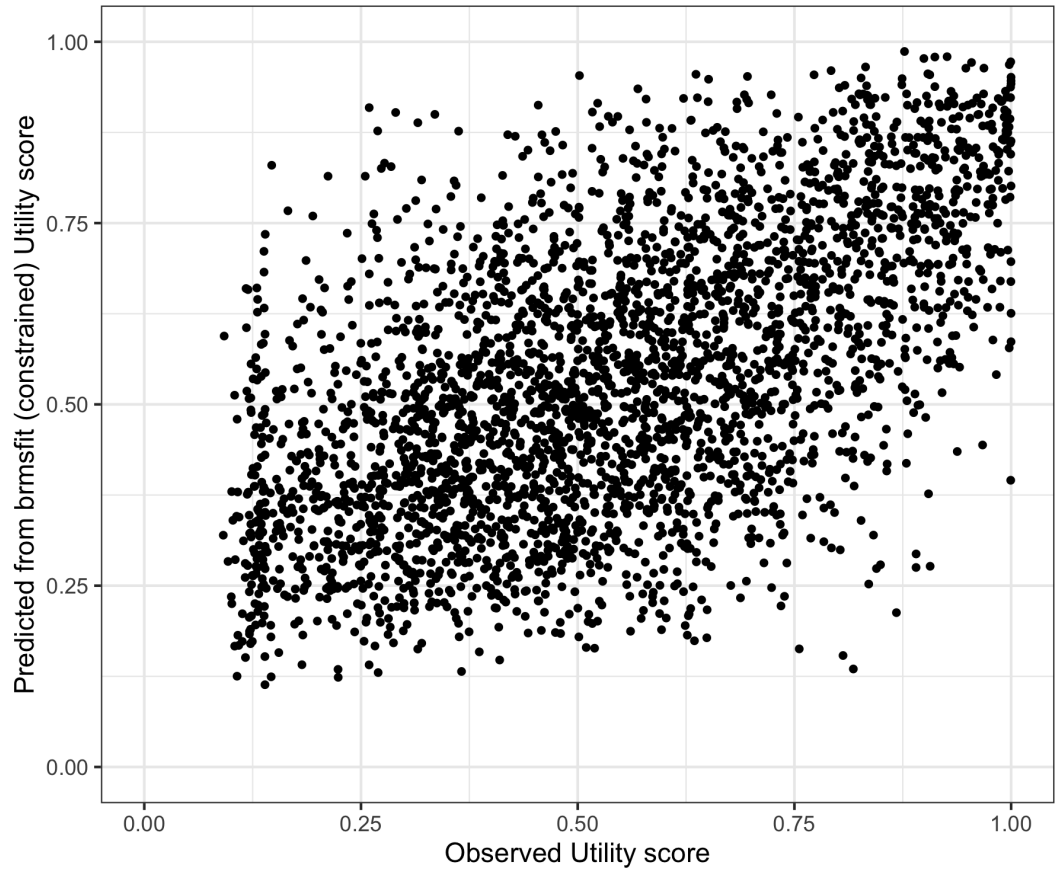


Figure 190: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

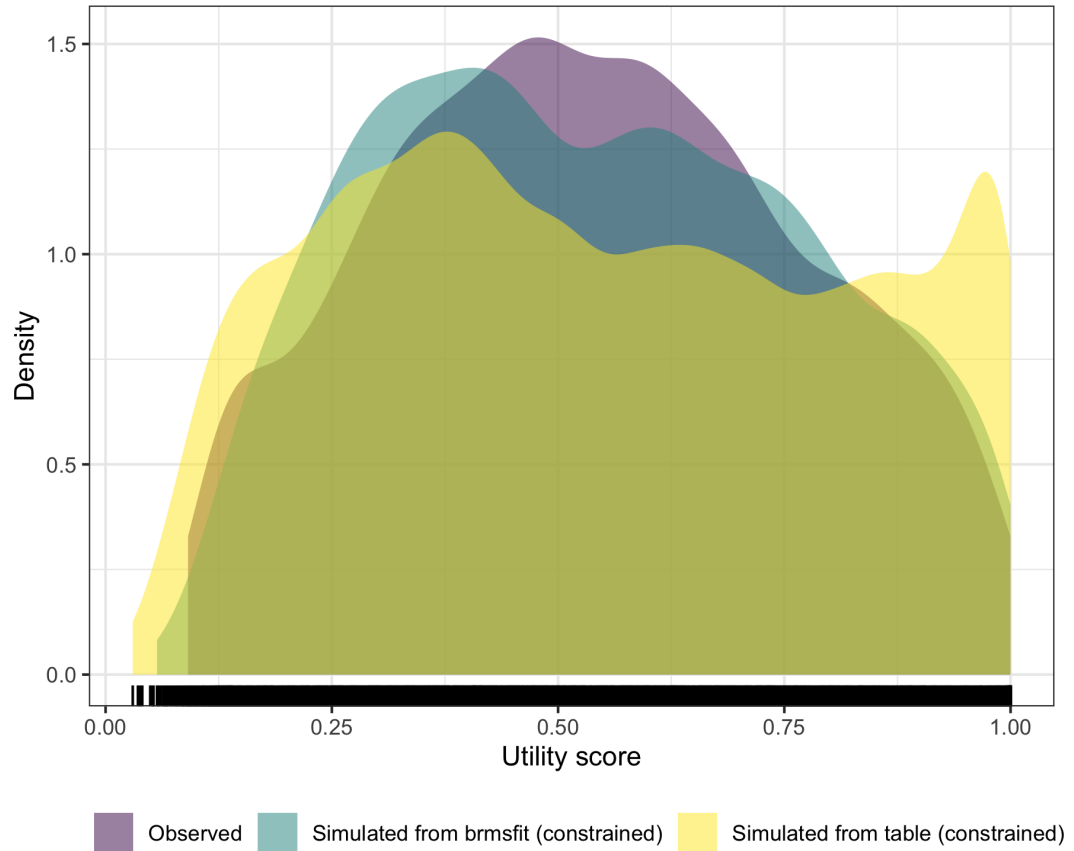


Figure 191: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

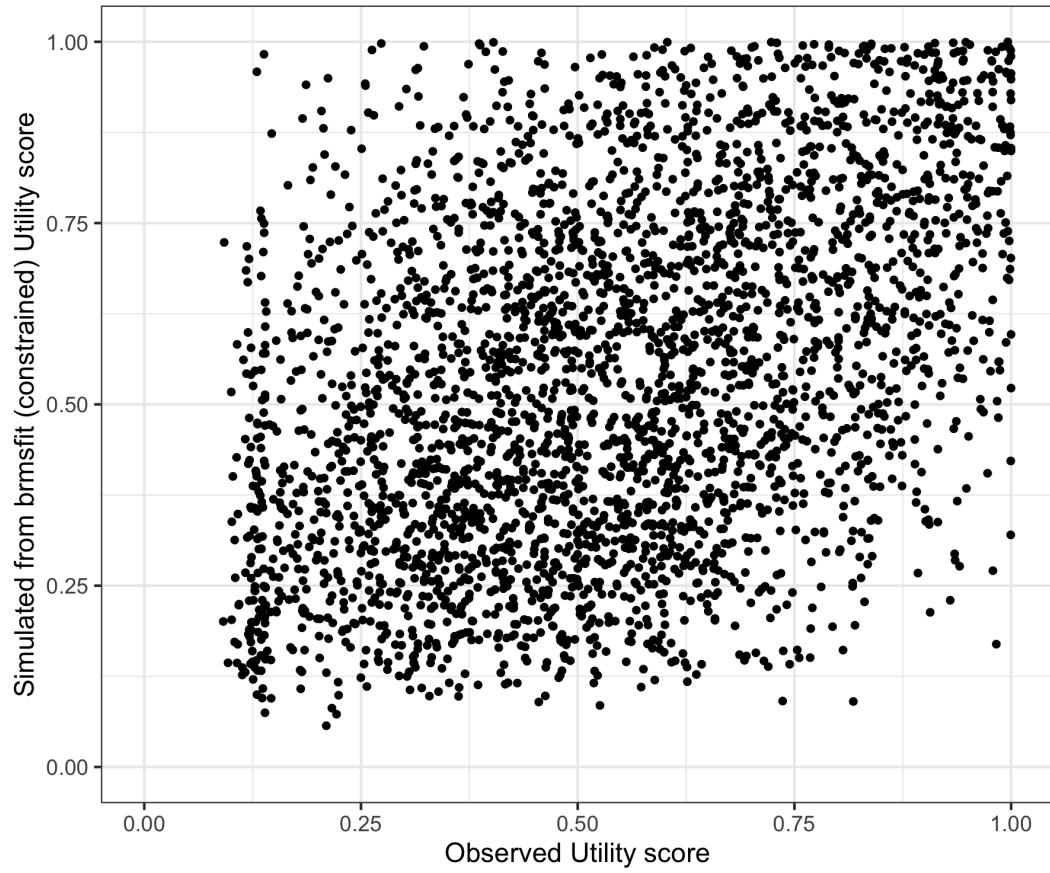


Figure 192: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

21 K10 with dage generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - dage (age); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is K10_dage_3_GLM_GSN_LOG.

Table 41: K10 with dage generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3902)							
sd(Intercept)	0.04	0.02	0.00	0.08	1.01	414	922
Population-Level Effects:							
Intercept	0.35	0.03	0.29	0.42	1.00	11 019	7 020
K10_scaled	-3.25	0.06	-3.37	-3.13	1.00	11 768	6 121
dage	-0.01	0.00	-0.01	-0.00	1.00	12 071	6 354
dstudyingworkingBoth	0.07	0.02	0.04	0.10	1.00	7 606	6 188
dstudyingworkingStudy	0.03	0.01	-0.00	0.06	1.00	7 593	6 105
dstudyingworkingWork	0.06	0.02	0.02	0.09	1.00	7 349	6 263
Family Specific Parameters:							
sigma	0.17	0.00	0.16	0.18	1.00	943	1 515

Formula: AQOL6D ~K10_scaled + dage + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 42: K10 with dage generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.44	0.01	0.419 , 0.474
RMSE	0.24	0.00	0.239 , 0.243

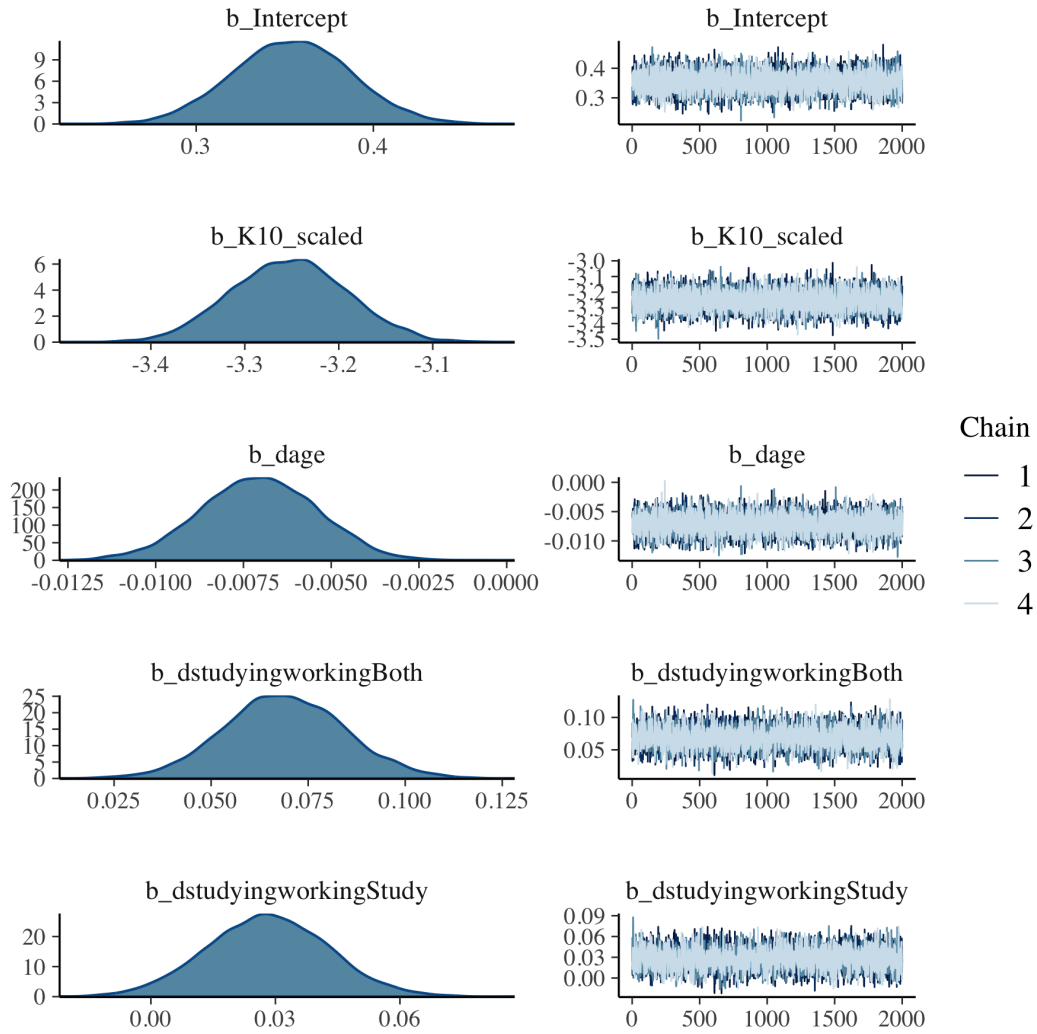


Figure 193: K10 with dage generalised linear mixed model with Gaussian distribution and log link population level effects

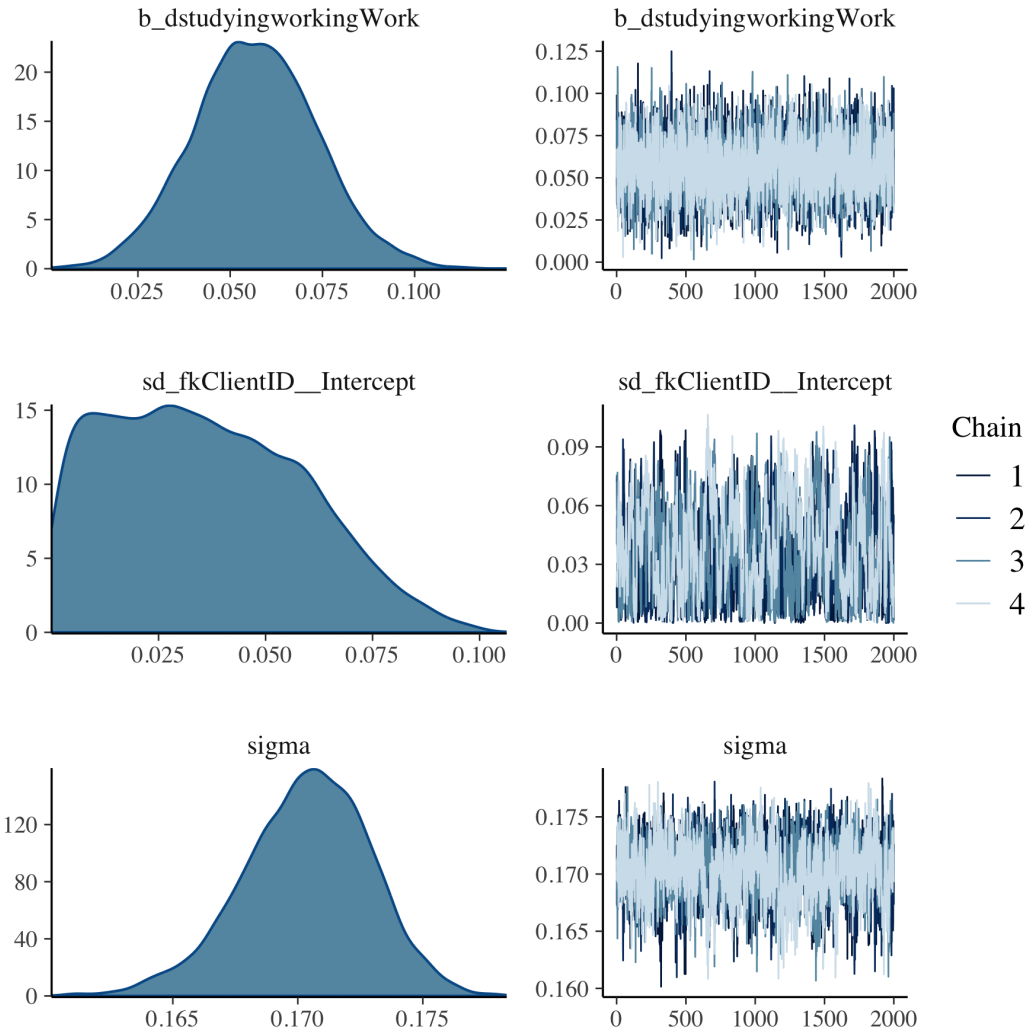


Figure 194: K10 with dage generalised linear mixed model with Gaussian distribution and log link group level effects

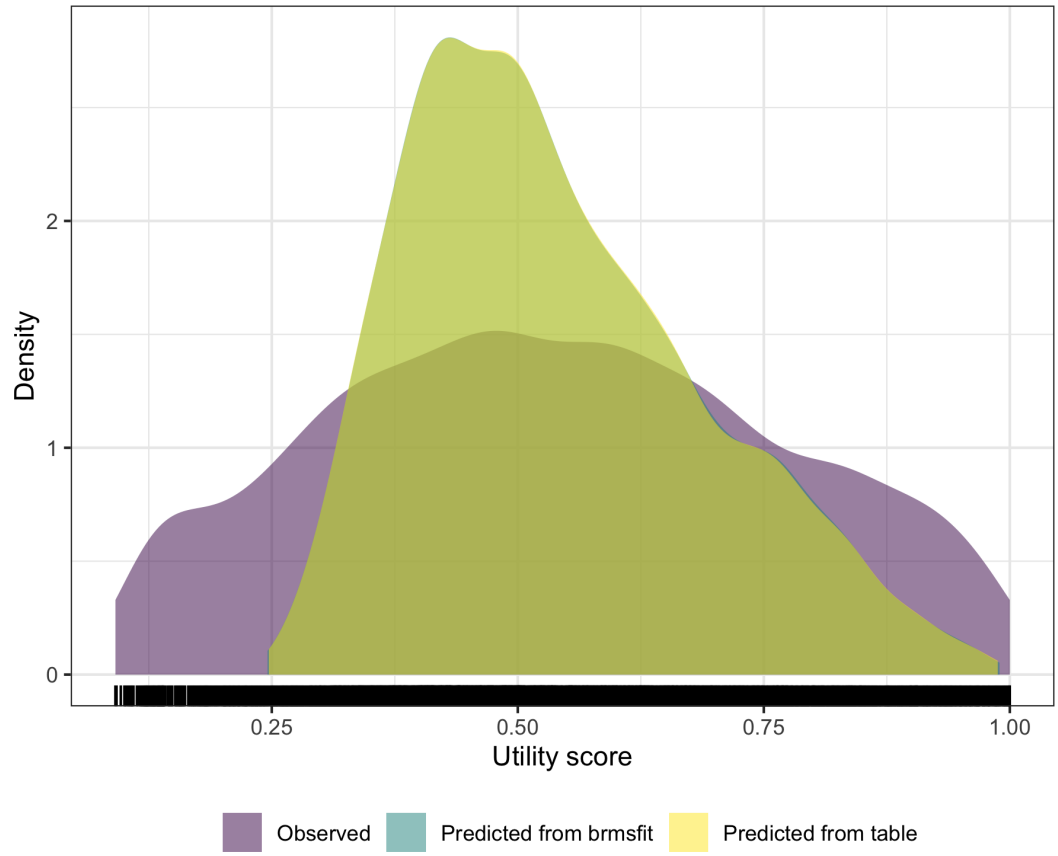


Figure 195: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

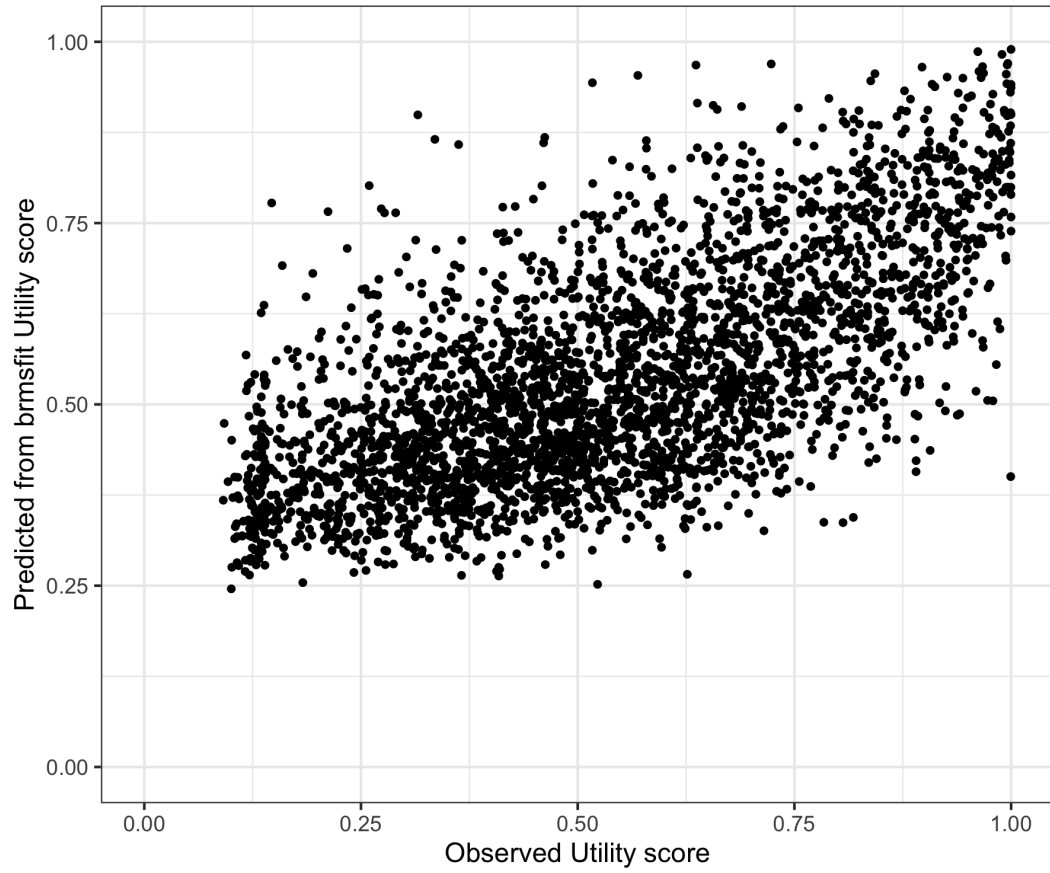


Figure 196: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

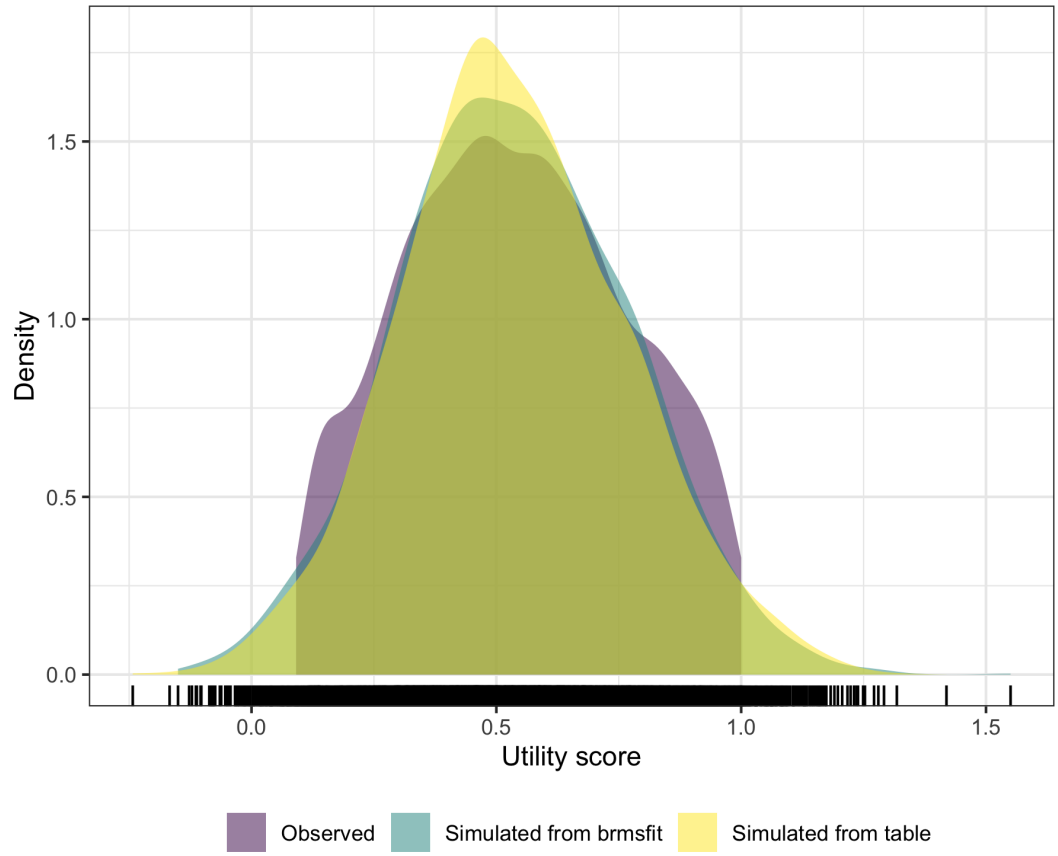


Figure 197: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

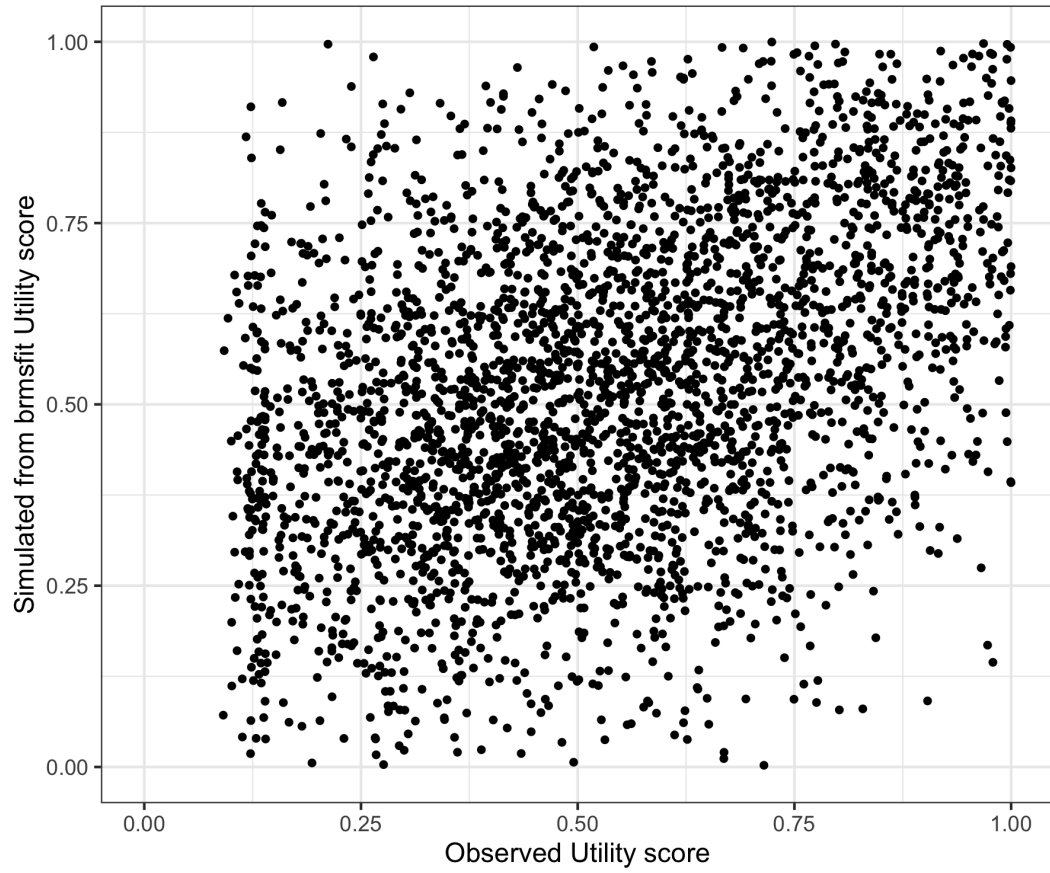


Figure 198: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

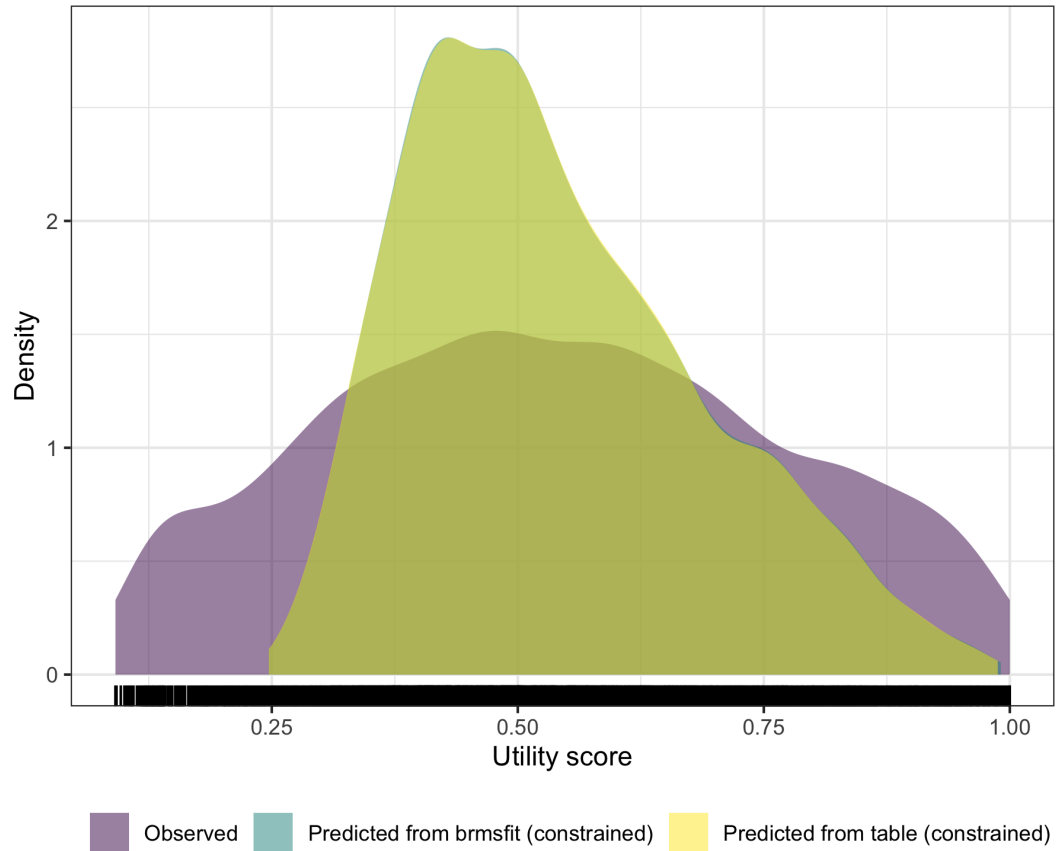


Figure 199: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

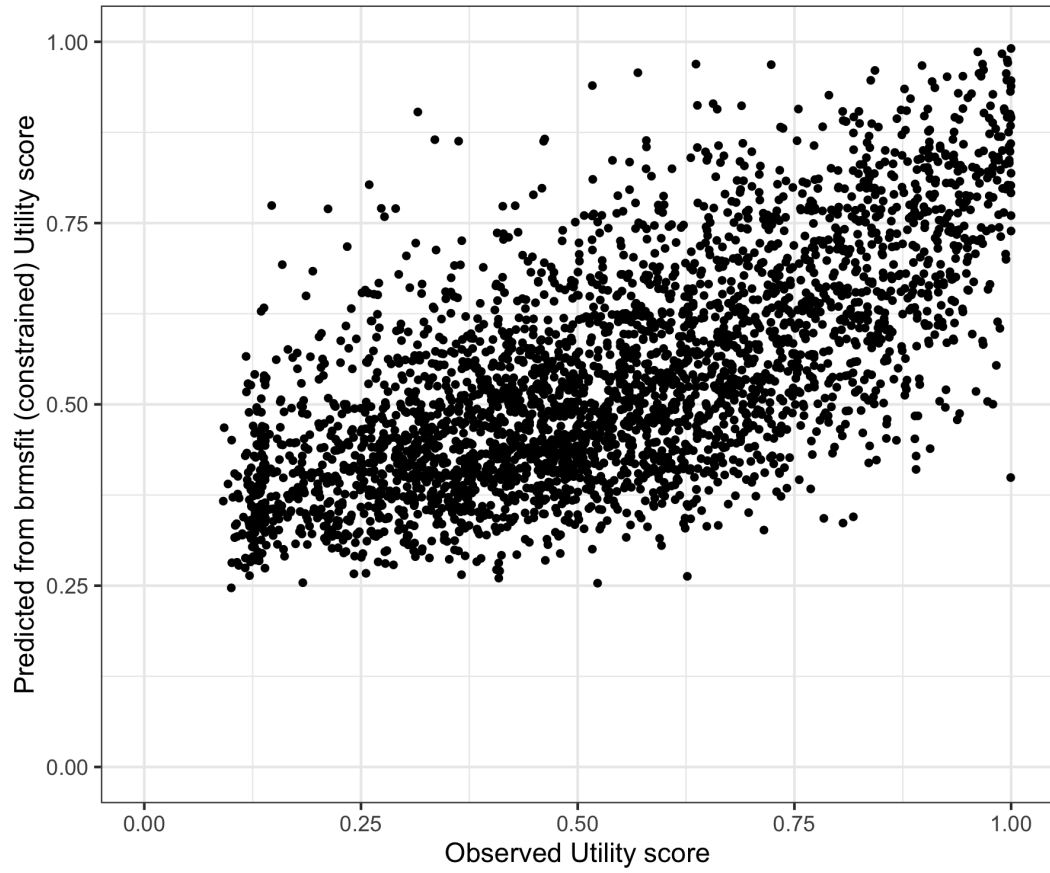


Figure 200: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

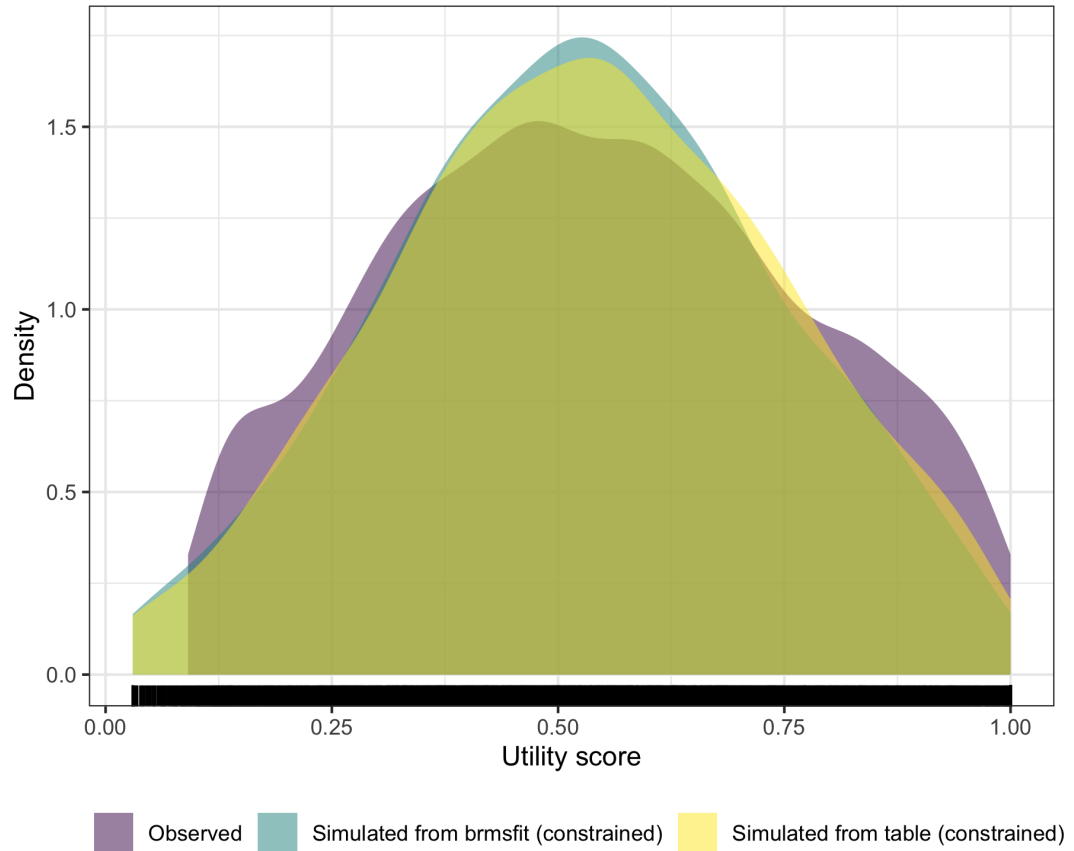


Figure 201: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

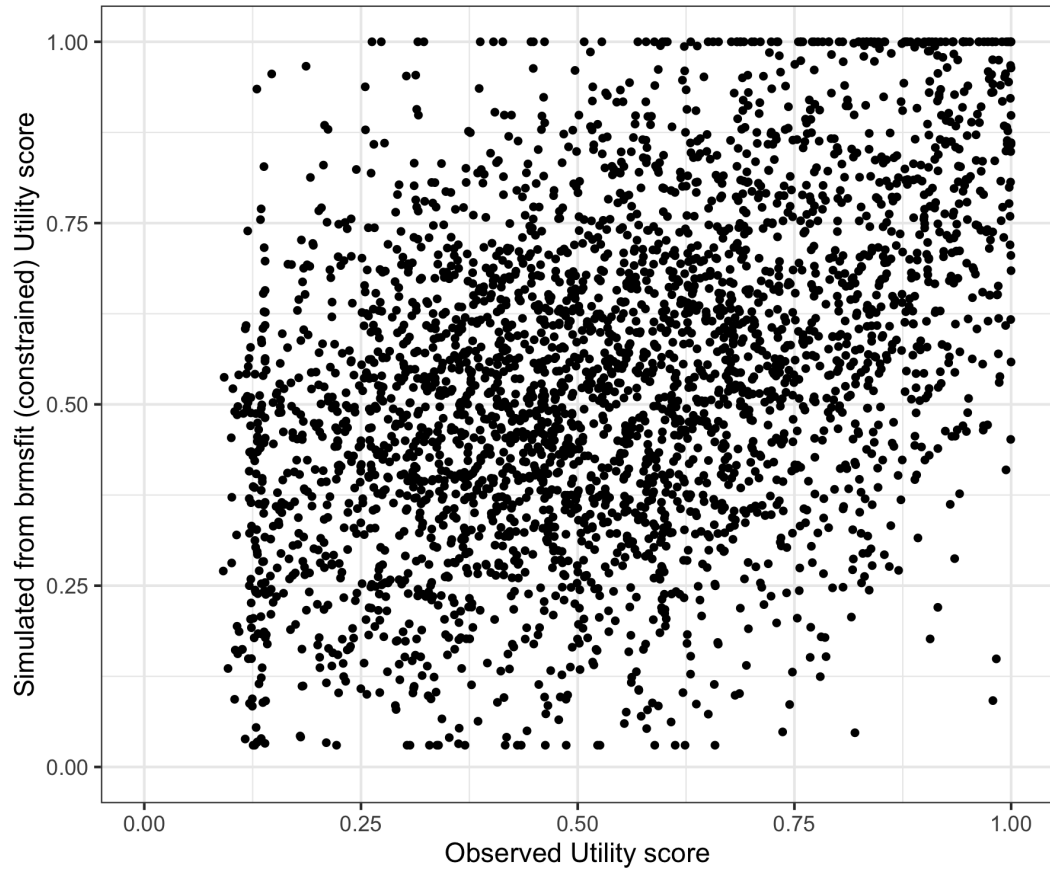


Figure 202: K10 with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

22 K10 with dage linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - dage (age); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is K10_dage_3_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 126 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>.

Table 43: K10 with dage linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3902)							
sd(Intercept)	0.31	0.19	0.01	0.54	1.69	6	24
Population-Level Effects:							
Intercept	1.69	0.07	1.56	1.82	1.00	4 724	5 346
K10_scaled	-6.05	0.12	-6.28	-5.82	1.00	4 450	4 169
dage	-0.02	0.00	-0.03	-0.01	1.00	4 227	5 173
dstudyingworkingBoth	0.15	0.03	0.09	0.20	1.00	3 148	4 229
dstudyingworkingStudy	0.04	0.03	-0.01	0.10	1.00	3 171	5 197
dstudyingworkingWork	0.13	0.03	0.07	0.19	1.00	3 189	3 903
Family Specific Parameters:							
sigma	0.46	0.12	0.26	0.60	1.69	6	21

Formula: AQOL6D_CLL ~K10_scaled + dage + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 44: K10 with dage linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.64	0.18	0.419 , 0.891
RMSE	1.07	0.03	1.045 , 1.104

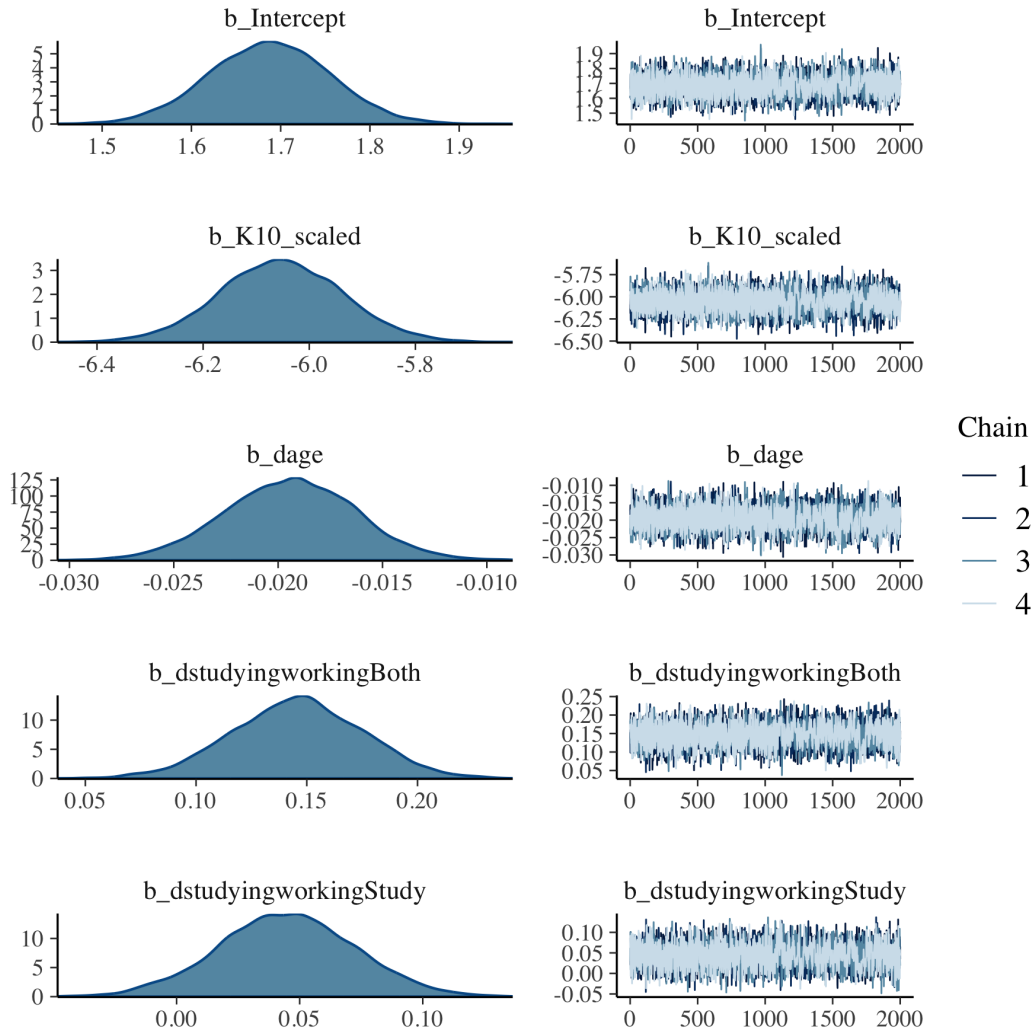


Figure 203: K10 with dage linear mixed model with complementary log log transformation population level effects

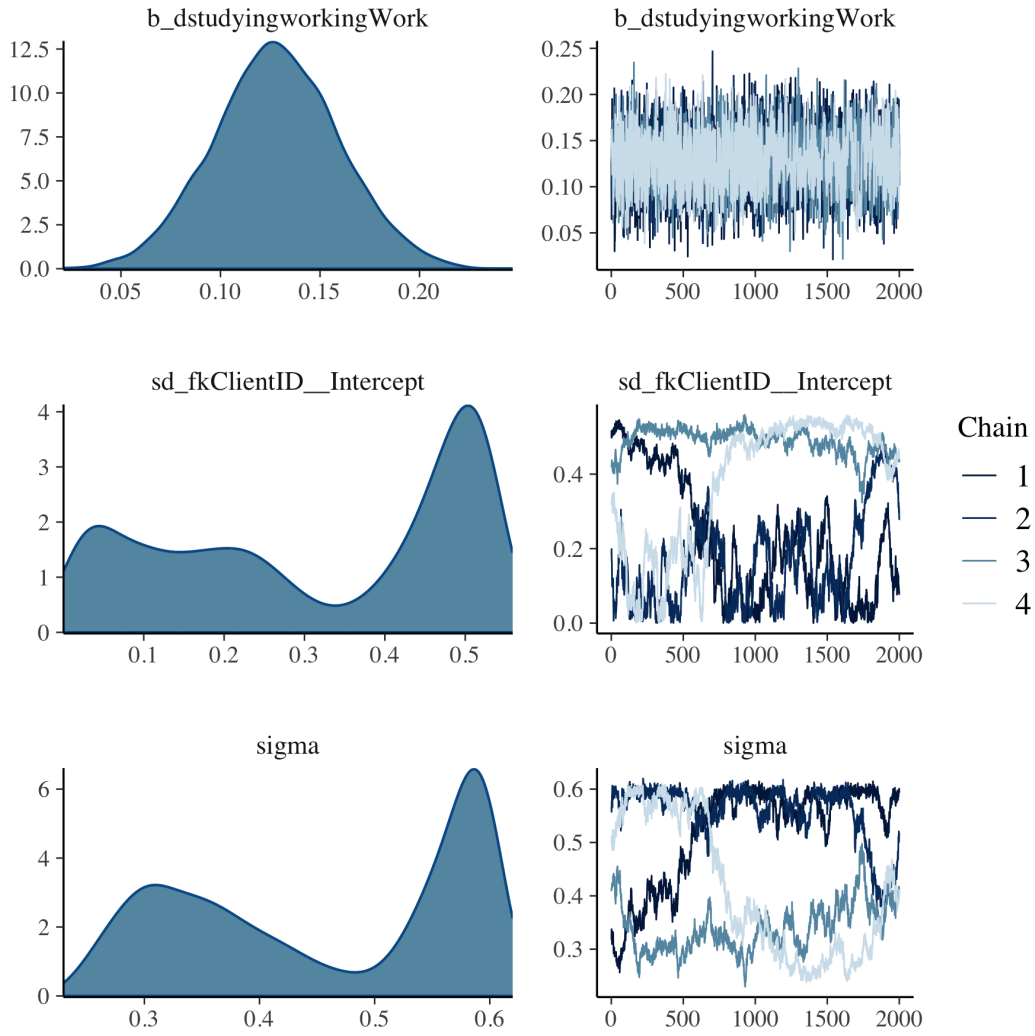


Figure 204: K10 with dage linear mixed model with complementary log log transformation group level effects

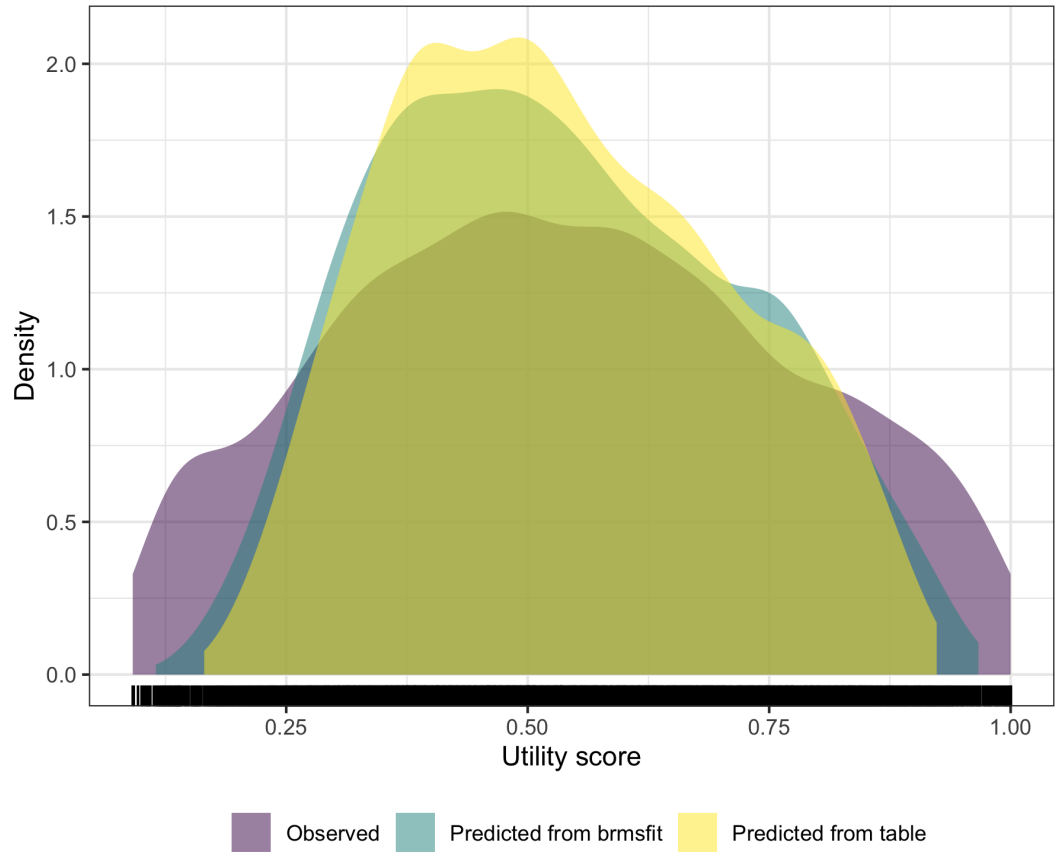


Figure 205: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

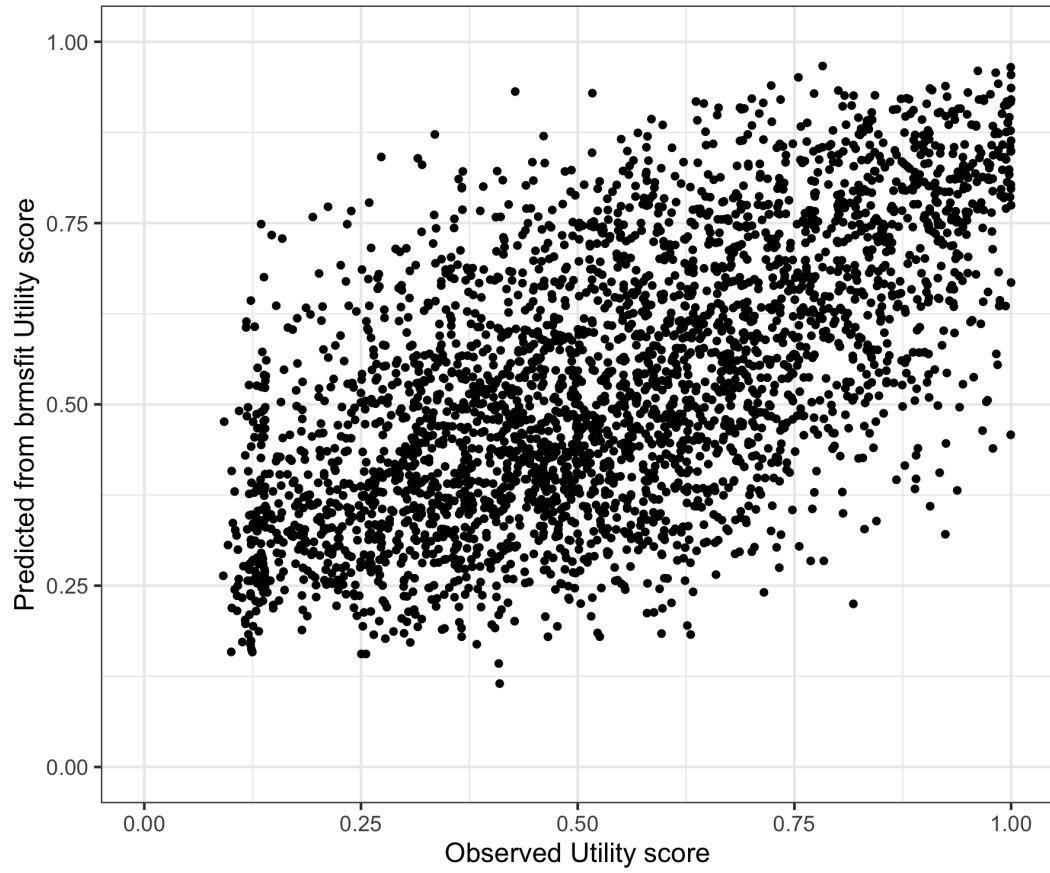


Figure 206: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

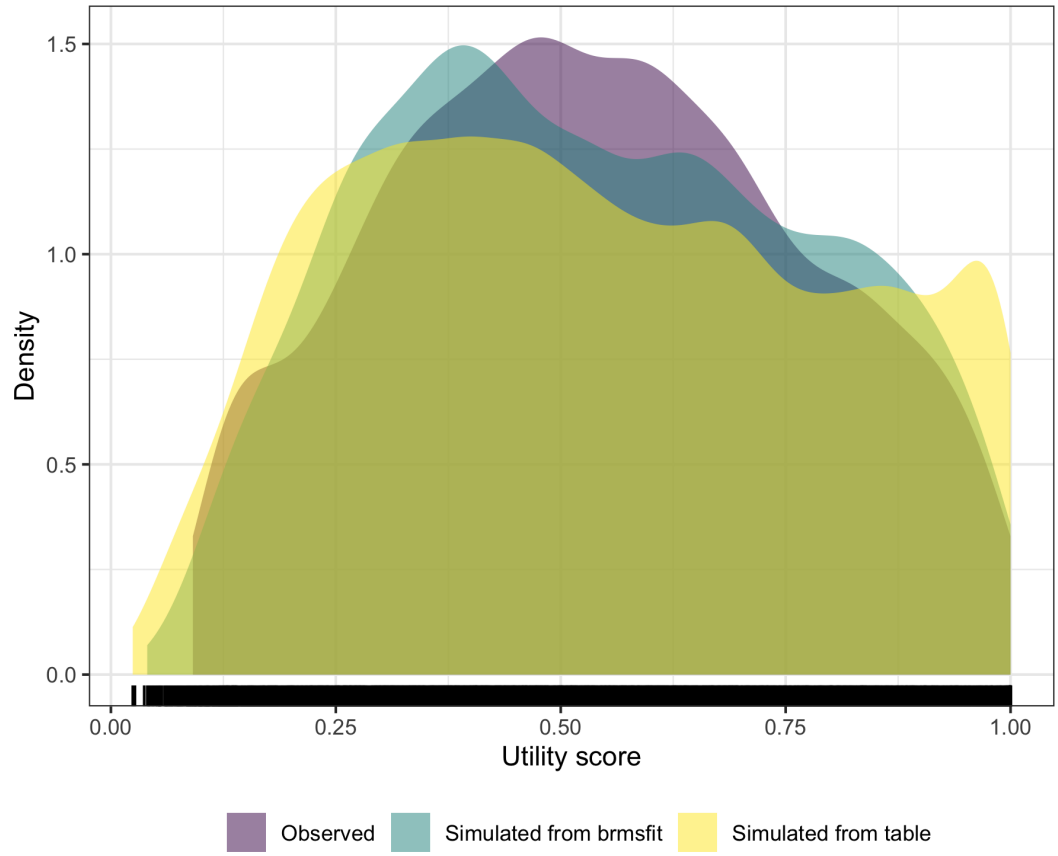


Figure 207: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

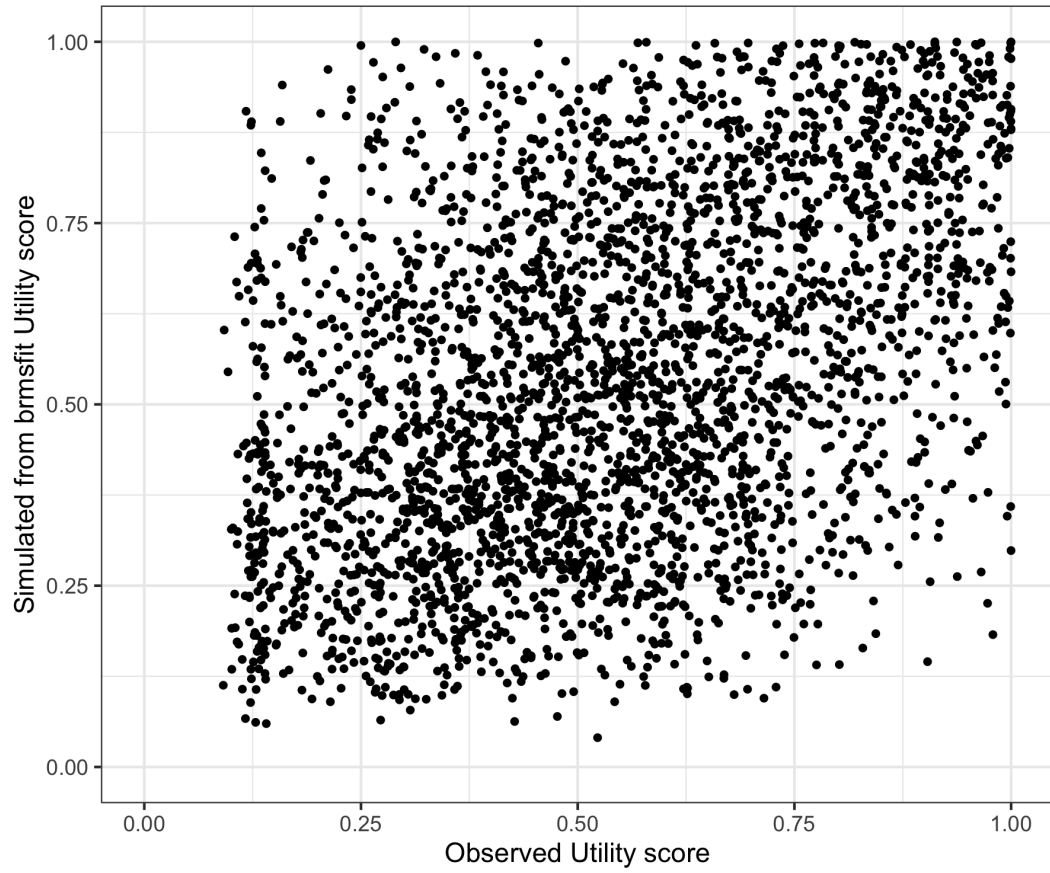


Figure 208: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

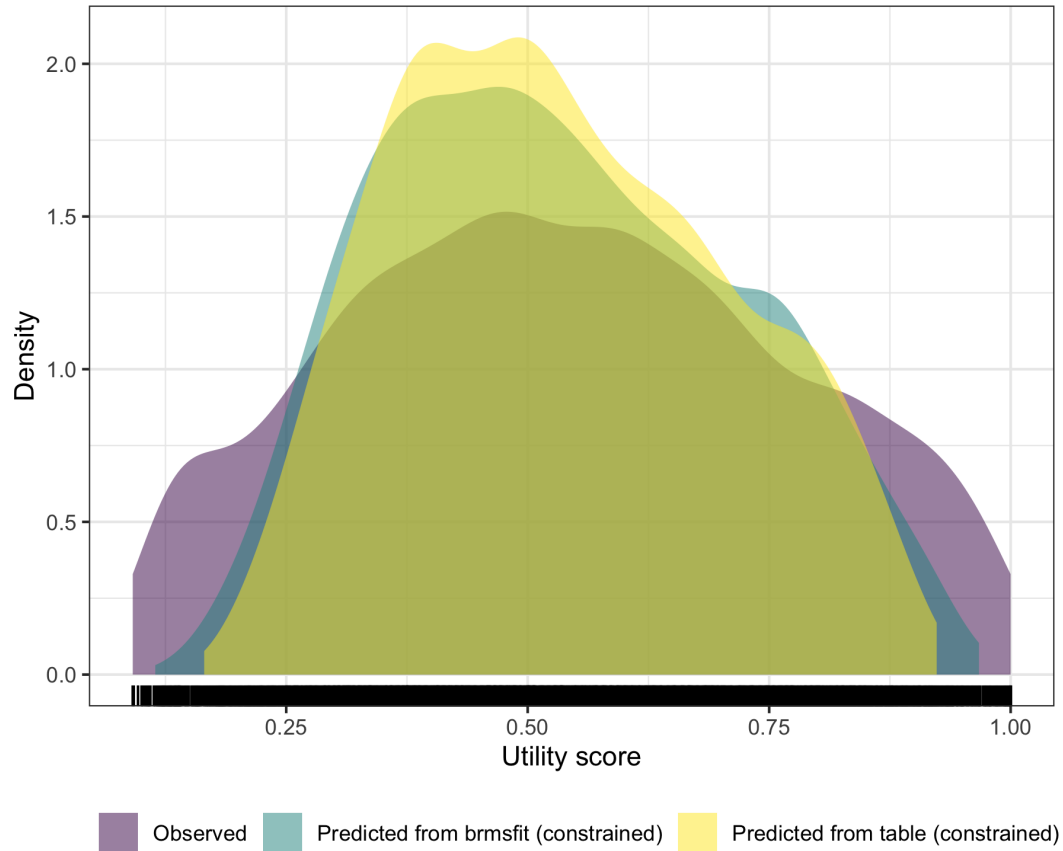


Figure 209: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

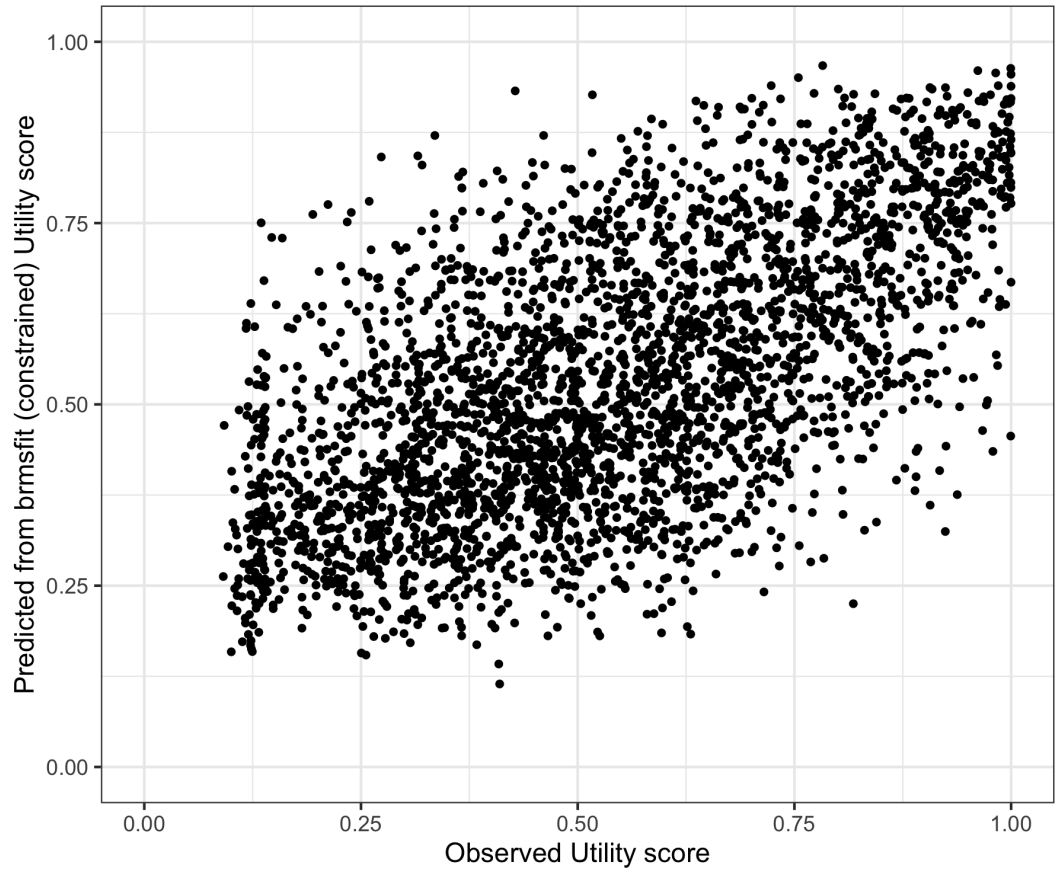


Figure 210: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

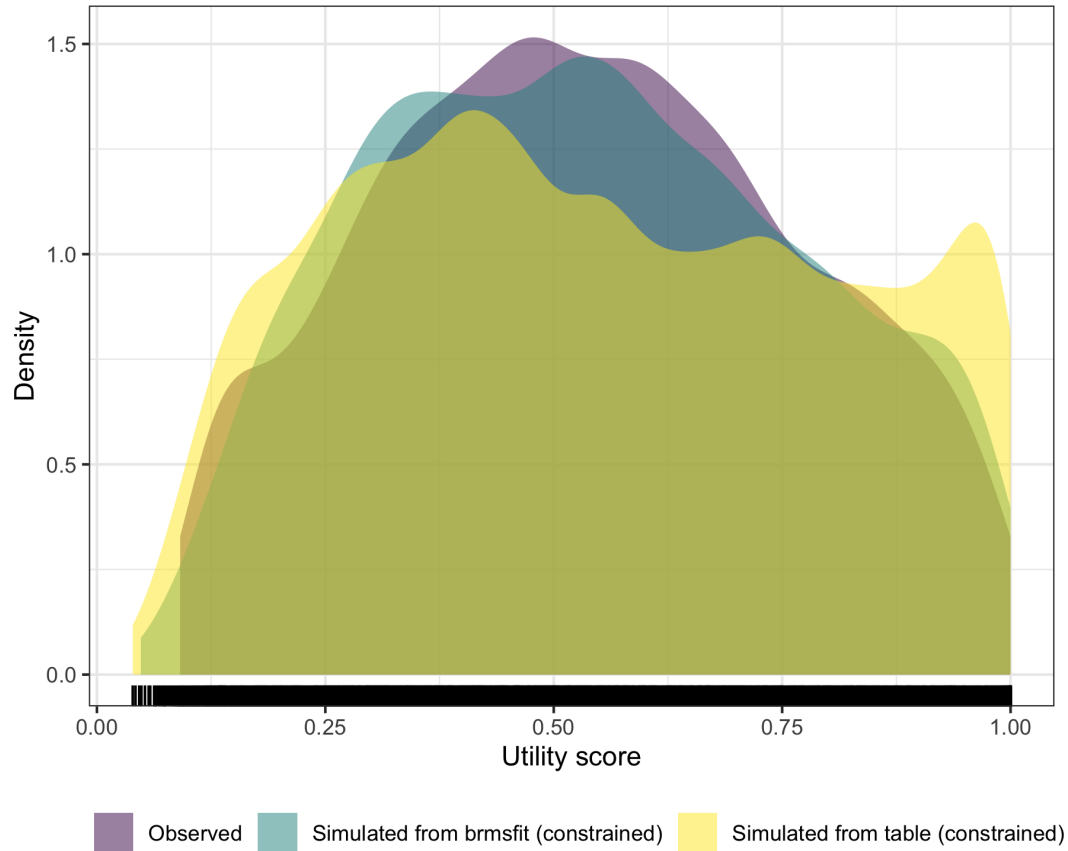


Figure 211: K10 with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

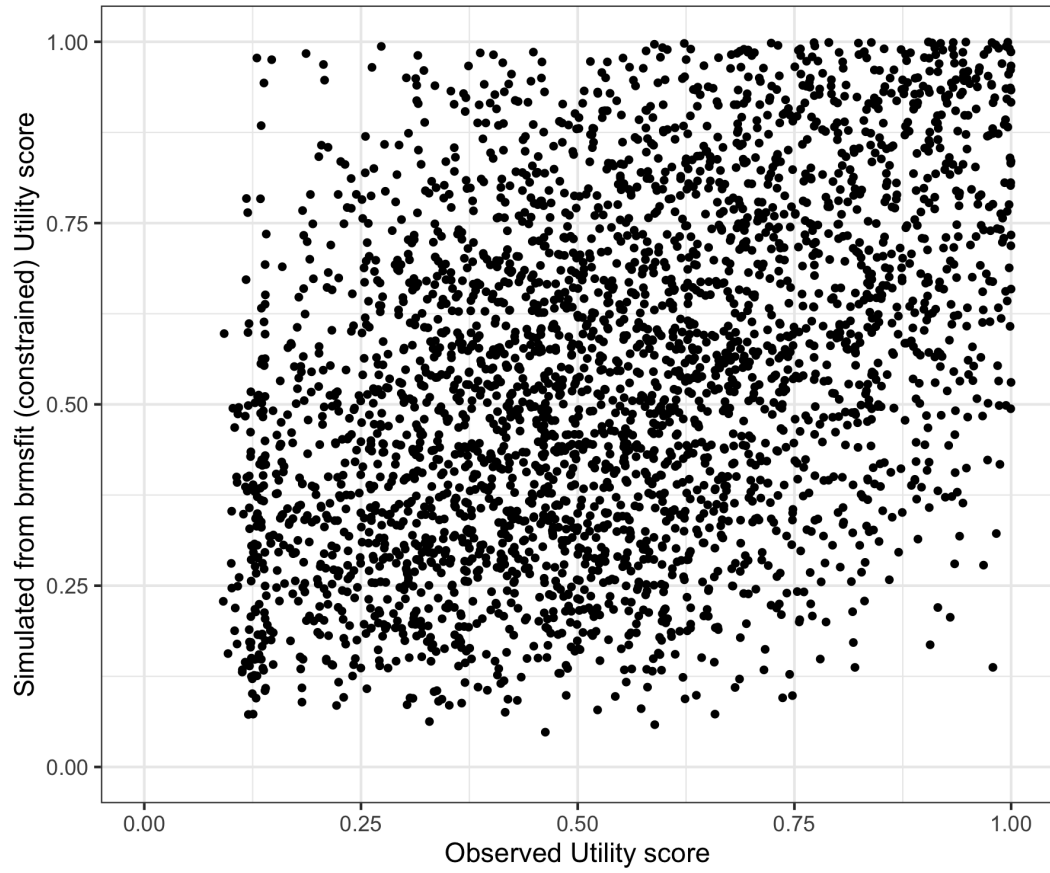


Figure 212: K10 with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

23 K10 with dgender generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - dgenderMale (); - dgenderOther (); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is K10_dgender_2_GLM_GSN_LOG.

Table 45: K10 with dgender generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3902)							
sd(Intercept)	0.04	0.02	0.00	0.08	1.01	468	892
Population-Level Effects:							
Intercept	0.21	0.02	0.16	0.25	1.00	10 228	6 503
K10_scaled	-3.24	0.06	-3.36	-3.12	1.00	11 971	6 383
dgenderMale	0.04	0.01	0.02	0.06	1.00	14 858	6 280
dgenderOther	-0.01	0.04	-0.09	0.06	1.00	14 810	6 093
dstudyingworkingBoth	0.07	0.02	0.04	0.10	1.00	9 181	6 220
dstudyingworkingStudy	0.05	0.01	0.02	0.08	1.00	8 247	6 372
dstudyingworkingWork	0.04	0.02	0.01	0.08	1.00	8 817	5 715
Family Specific Parameters:							
sigma	0.17	0.00	0.16	0.17	1.01	963	1 378

Formula: AQOL6D ~K10_scaled + dgender + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 46: K10 with dgender generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.44	0.01	0.42 , 0.475
RMSE	0.24	0.00	0.239 , 0.243

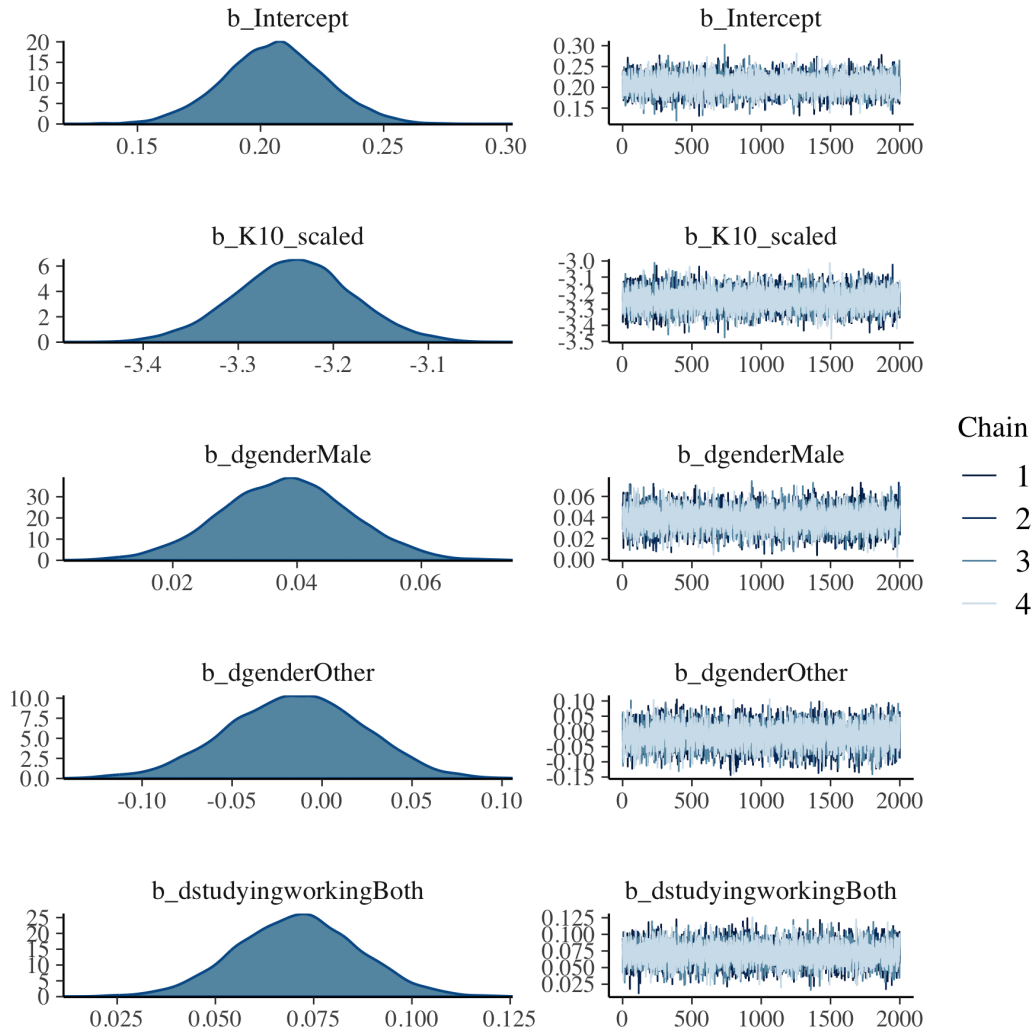


Figure 213: K10 with dgender generalised linear mixed model with Gaussian distribution and log link population level effects

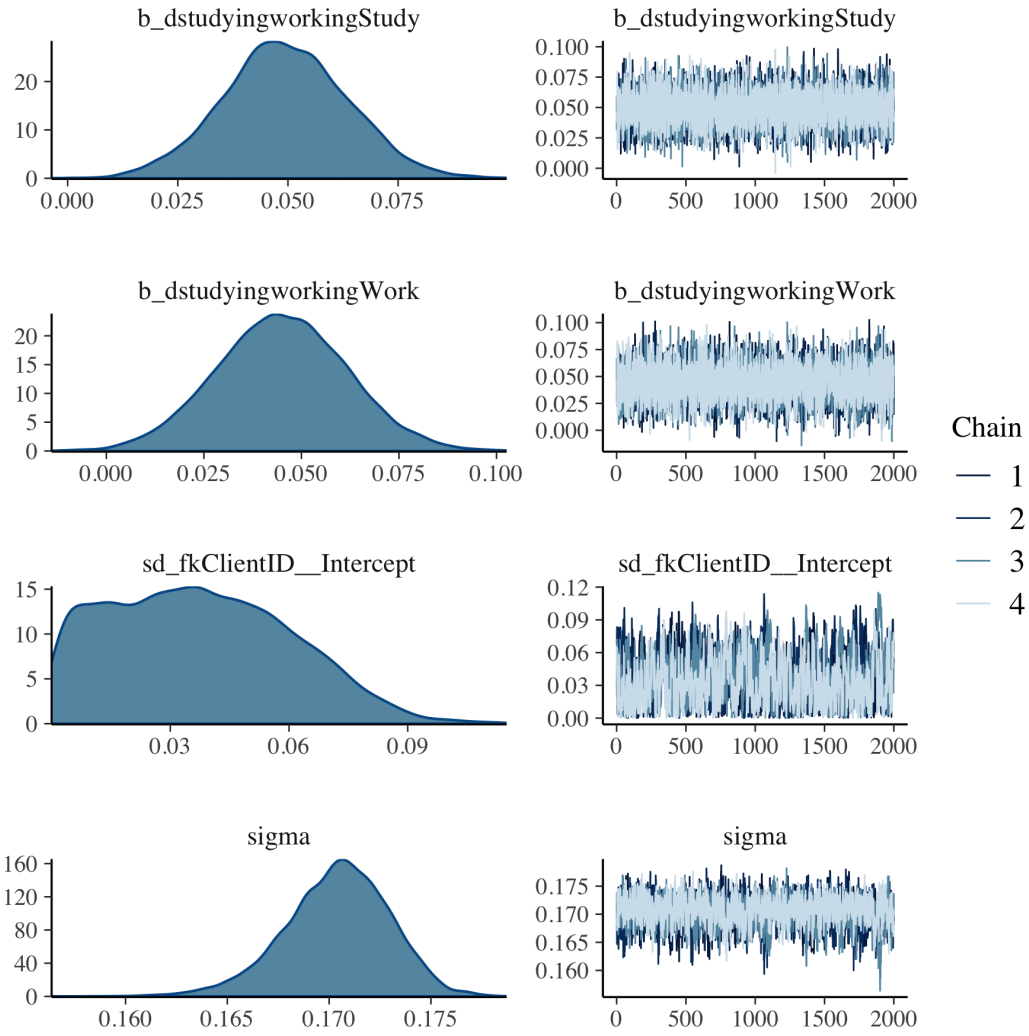


Figure 214: K10 with dgender generalised linear mixed model with Gaussian distribution and log link group level effects

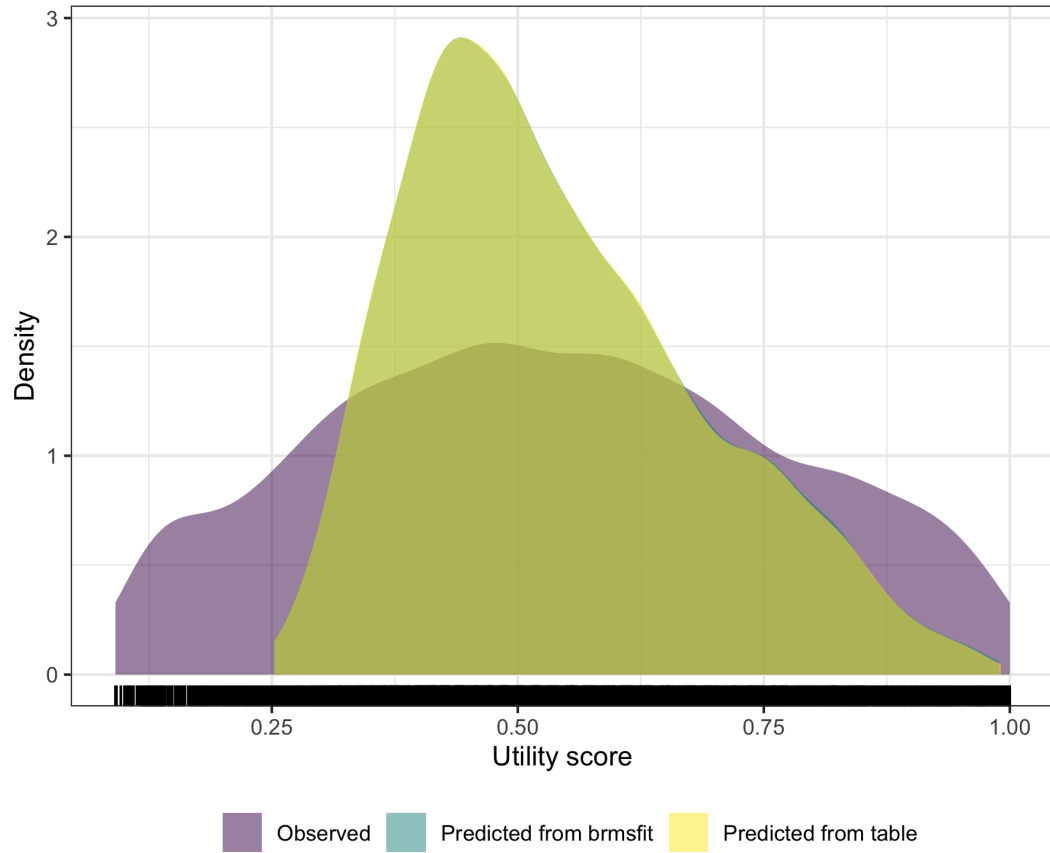


Figure 215: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

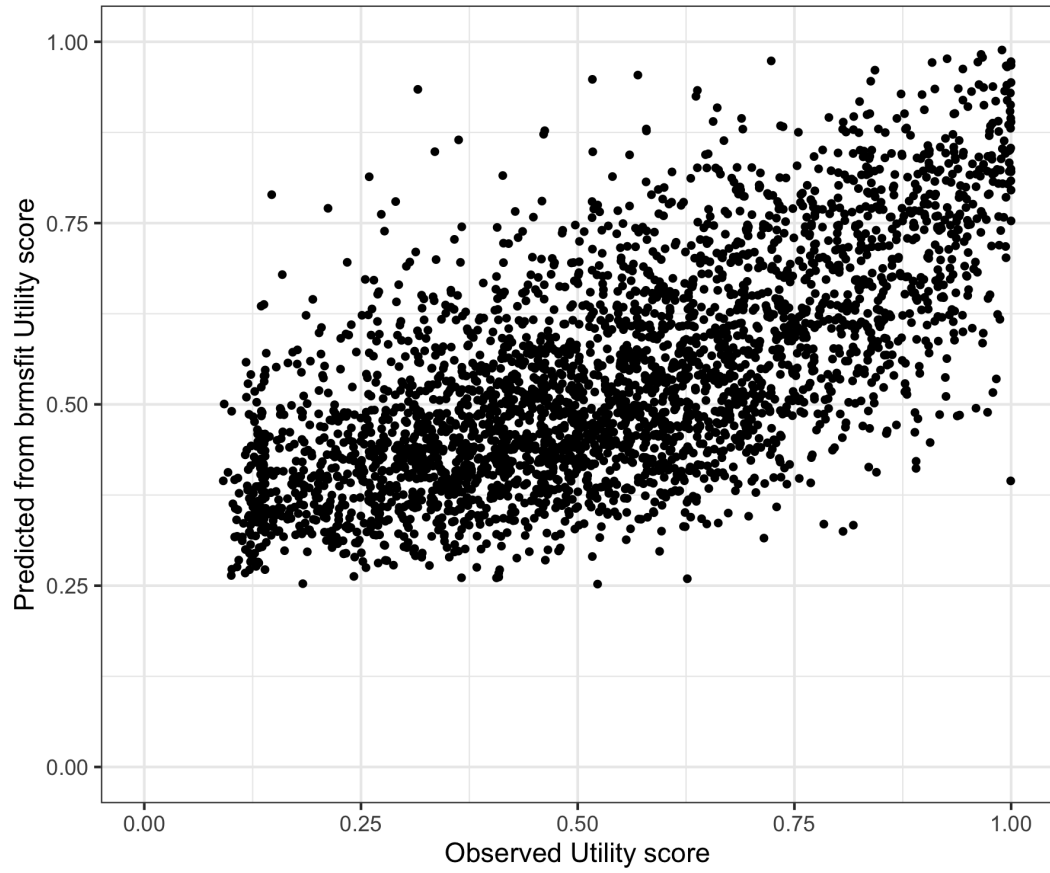


Figure 216: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

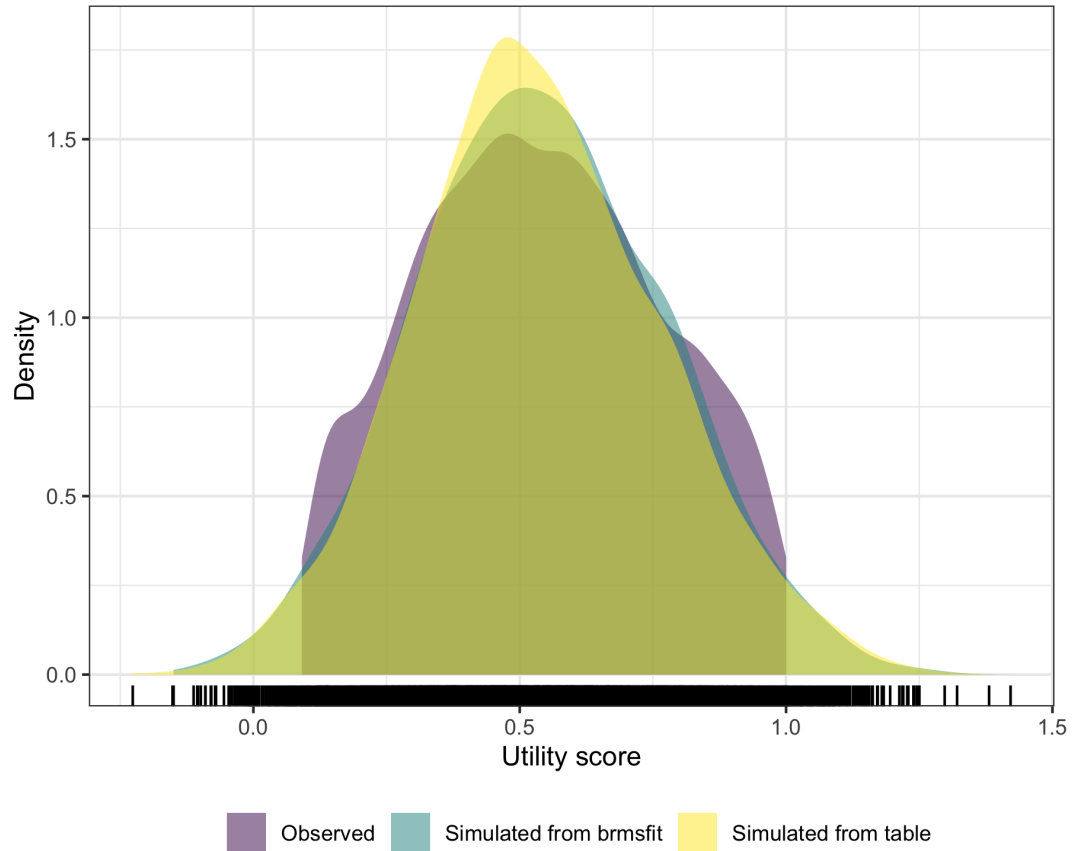


Figure 217: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

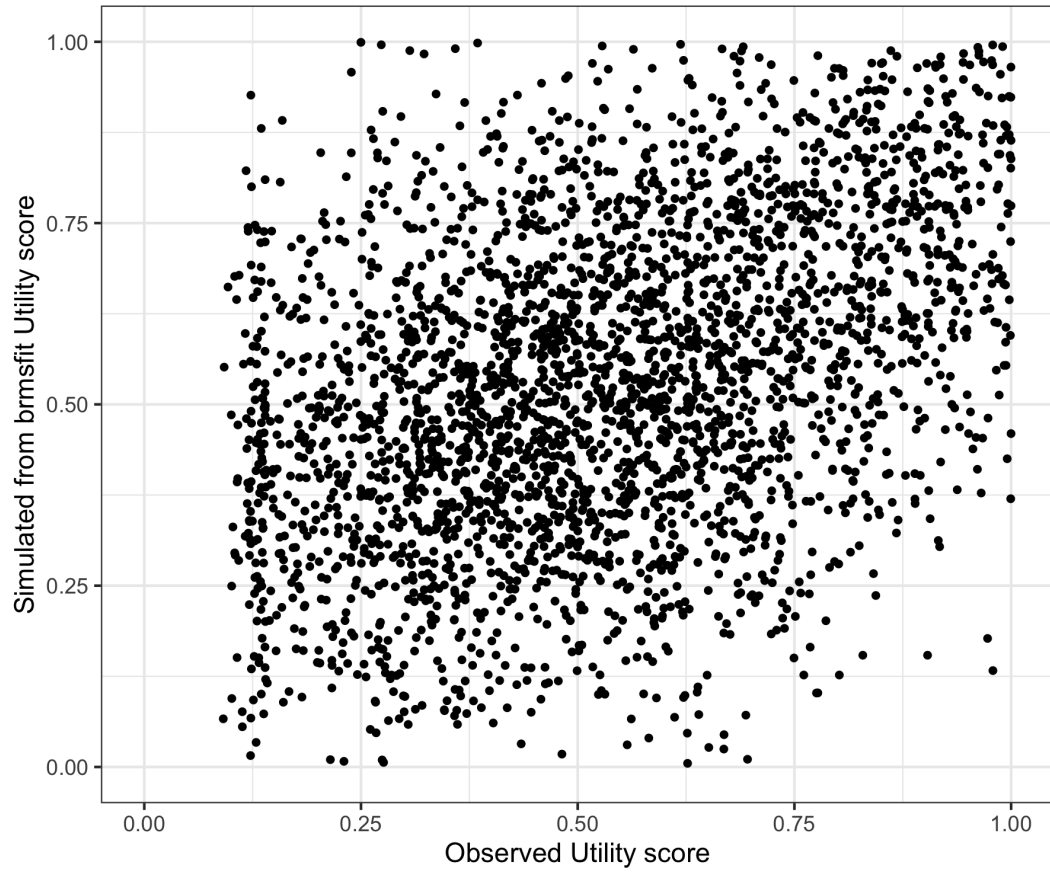


Figure 218: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values



Figure 219: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

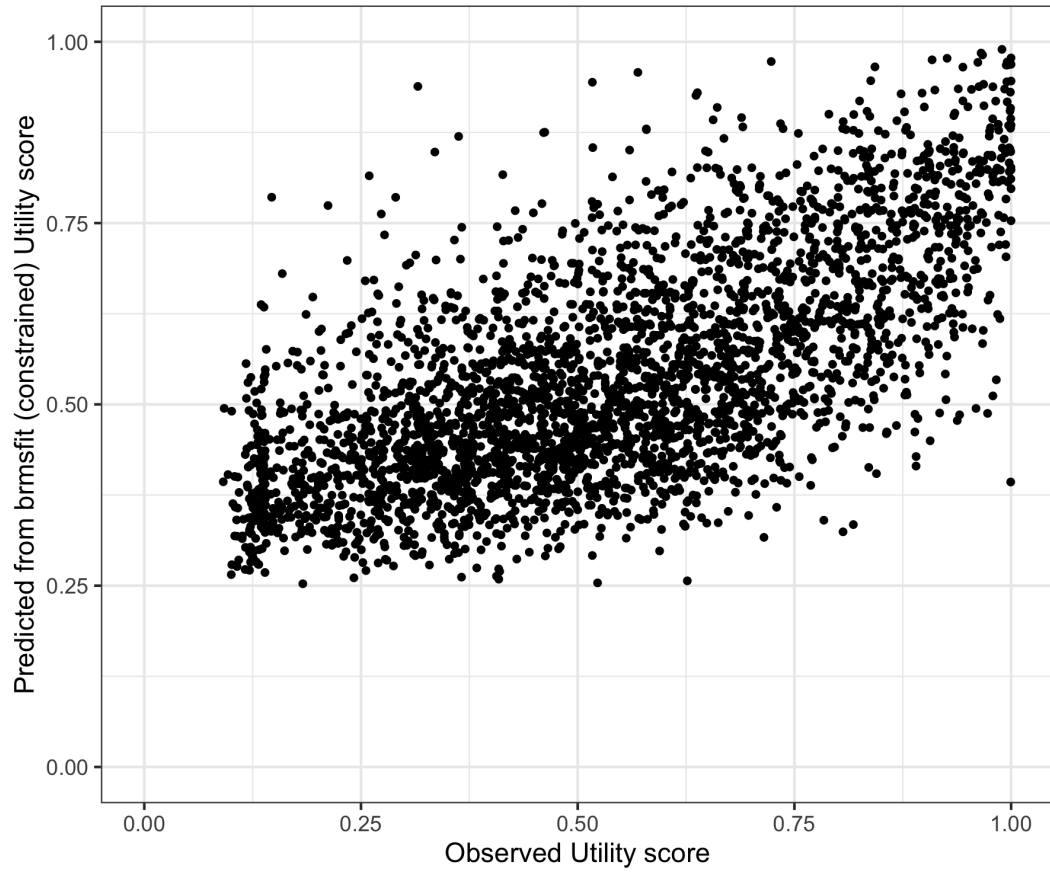


Figure 220: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

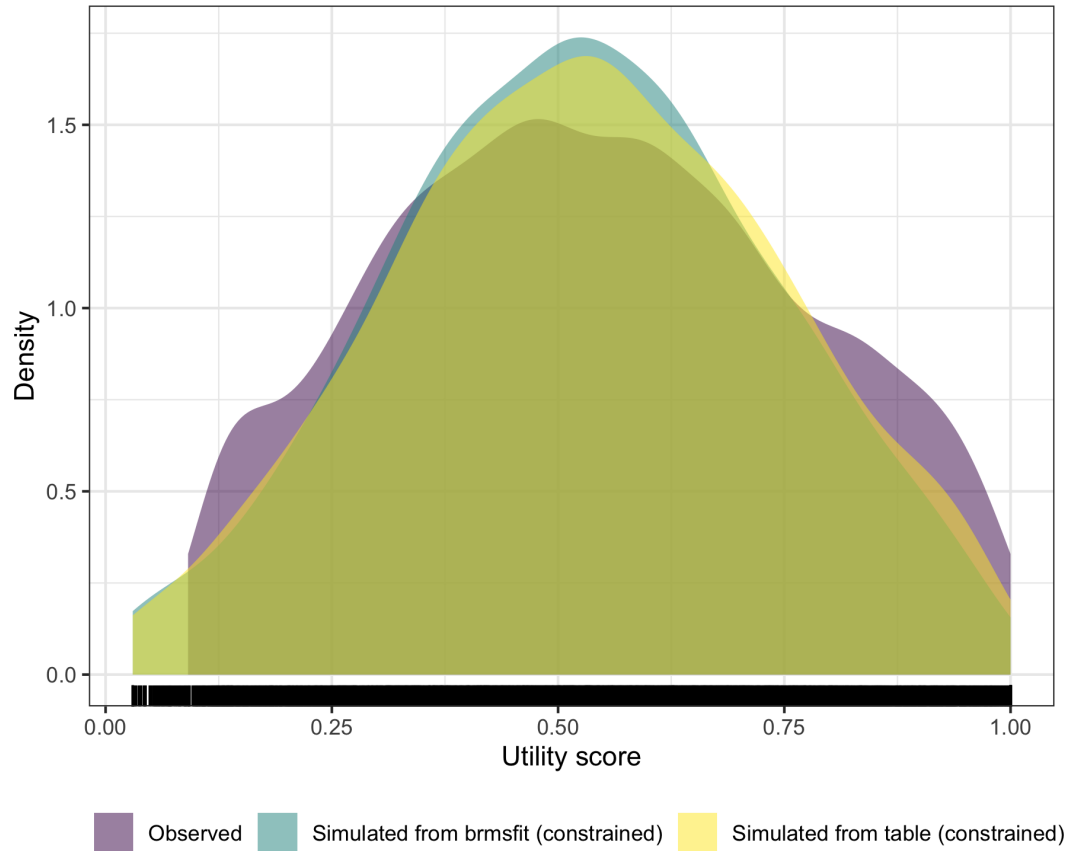


Figure 221: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

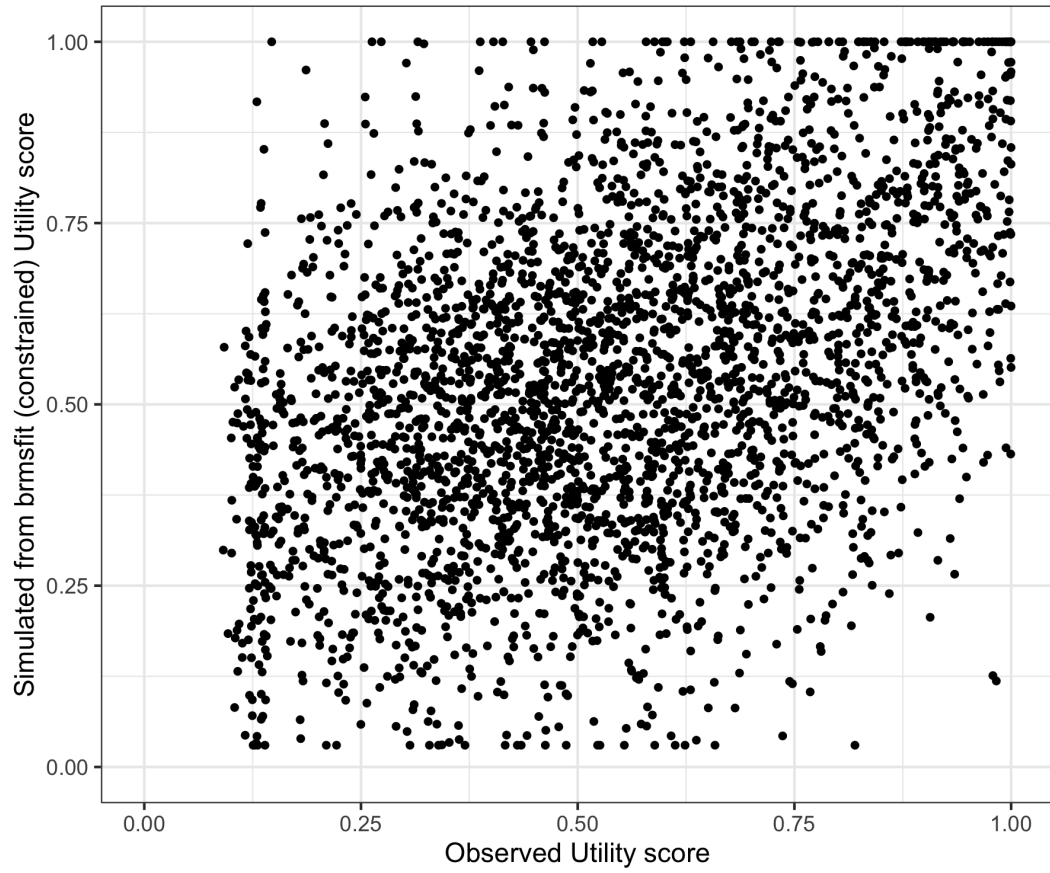


Figure 222: K10 with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

24 K10 with dgender linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - K10 (Kessler Psychological Distress Scale (10 Item) (multiplied by 0.01)); - dgenderMale (); - dgenderOther (); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is K10_dgender_2_0LS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 47: K10 with dgender linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3902)							
sd(Intercept)	0.26	0.14	0.02	0.51	1.43	8	20
Population-Level Effects:							
Intercept	1.29	0.04	1.20	1.37	1.00	6 778	5 961
K10_scaled	-6.03	0.12	-6.25	-5.80	1.00	8 273	5 612
dgenderMale	0.09	0.02	0.05	0.13	1.00	7 293	6 056
dgenderOther	-0.03	0.06	-0.15	0.10	1.00	9 450	6 130
dstudyingworkingBoth	0.16	0.03	0.10	0.21	1.00	5 999	5 871
dstudyingworkingStudy	0.10	0.03	0.05	0.16	1.00	5 570	6 182
dstudyingworkingWork	0.10	0.03	0.04	0.16	1.00	6 326	5 575
Family Specific Parameters:							
sigma	0.51	0.08	0.32	0.60	1.43	8	19

Formula: AQOL6D_CLL ~K10_scaled + dgender + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 48: K10 with dgender linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.57	0.13	0.419 , 0.839
RMSE	1.09	0.02	1.074 , 1.103

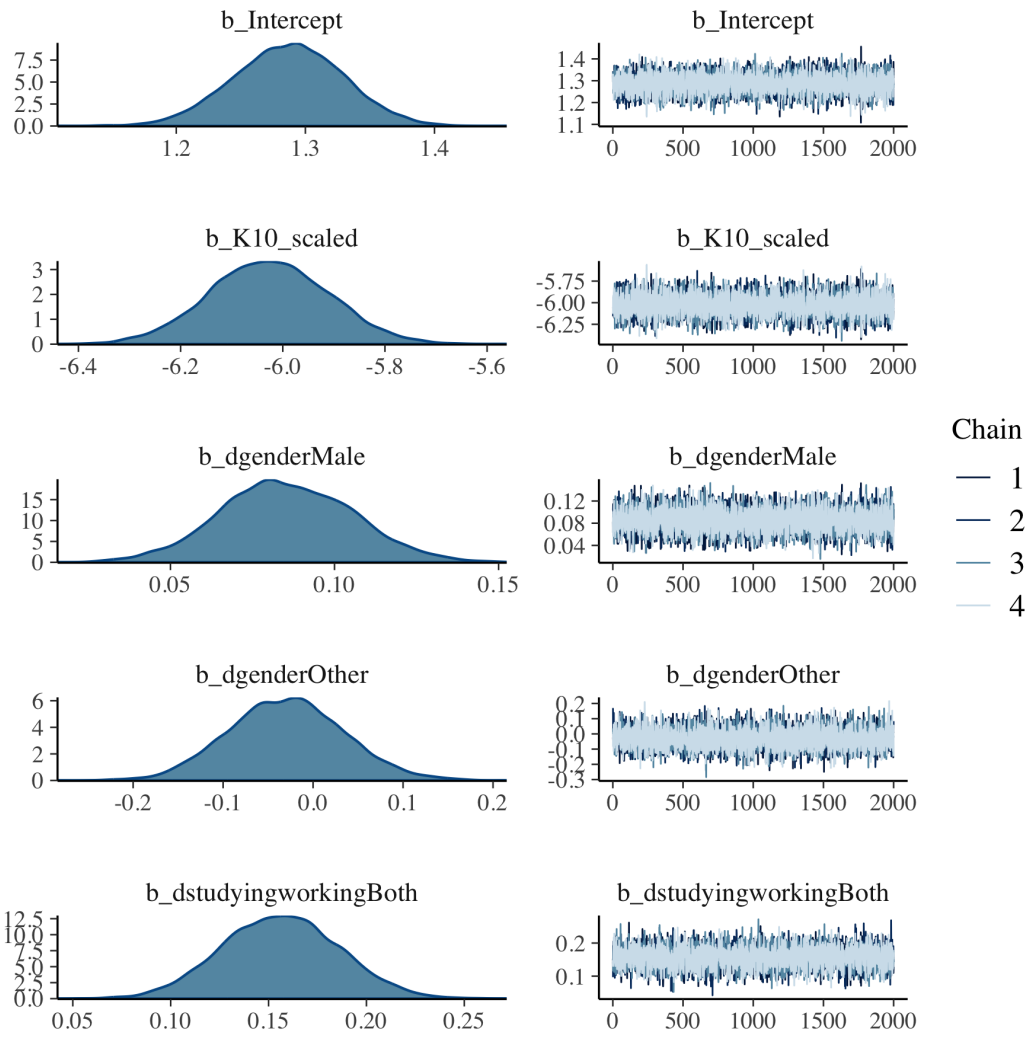


Figure 223: K10 with dgender linear mixed model with complementary log log transformation population level effects

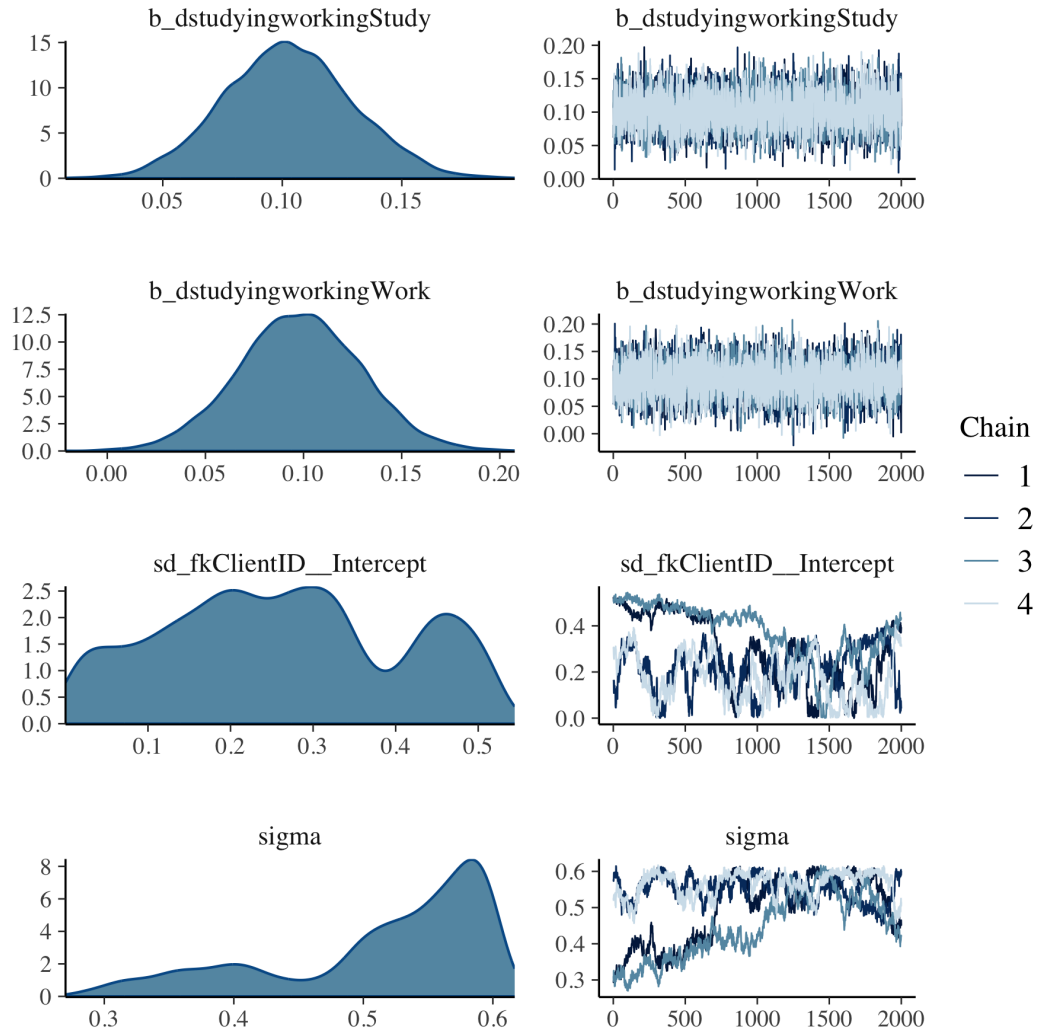


Figure 224: K10 with dgender linear mixed model with complementary log log transformation group level effects

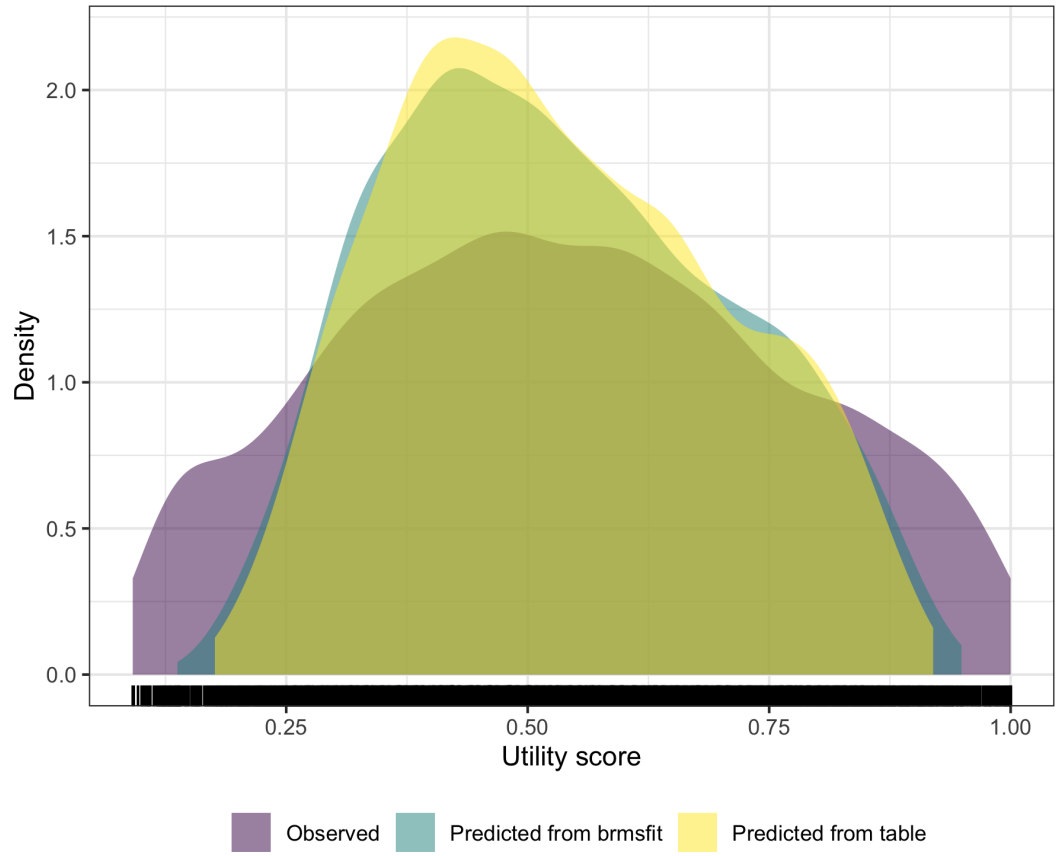


Figure 225: K10 with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

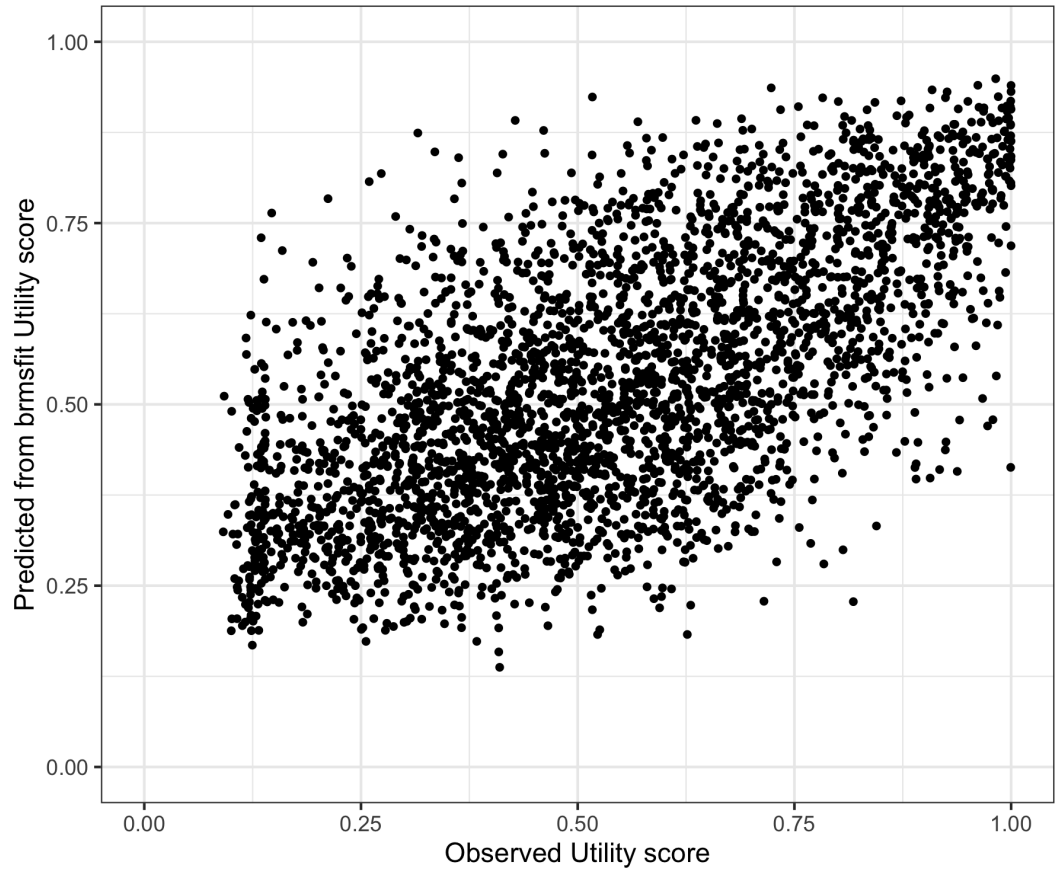


Figure 226: K10 with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

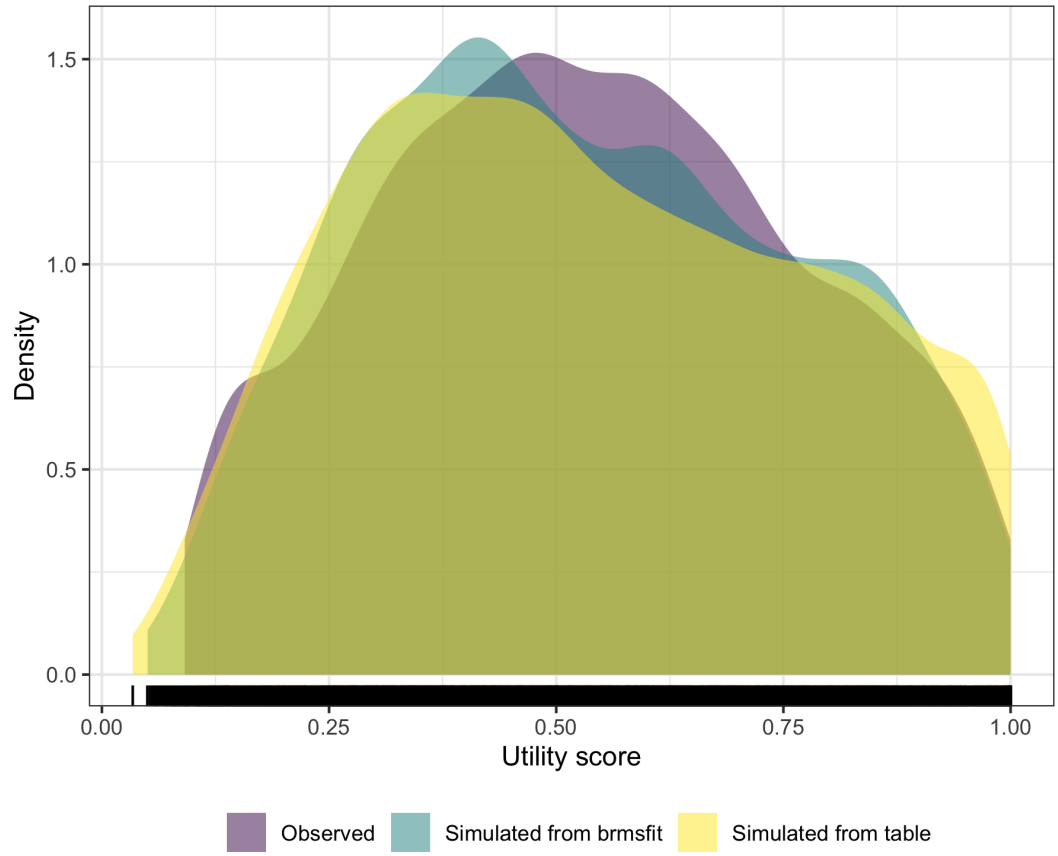


Figure 227: K10 with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

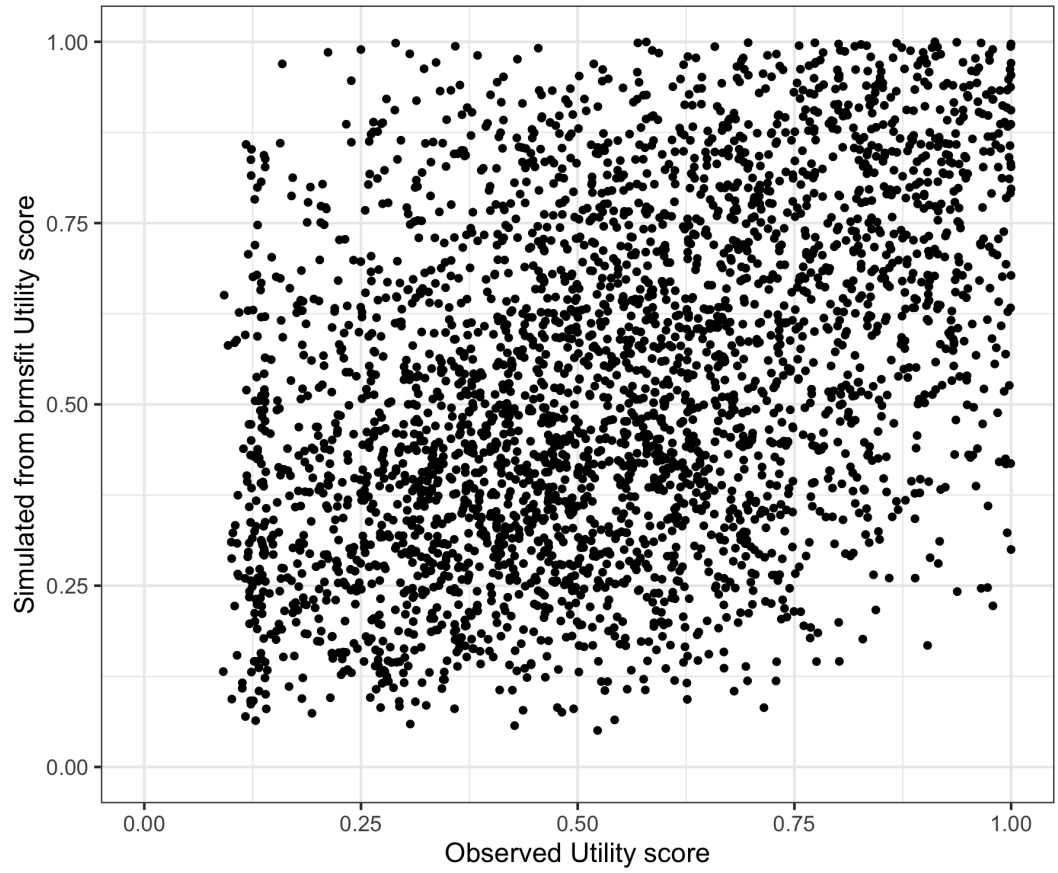


Figure 228: K10 with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

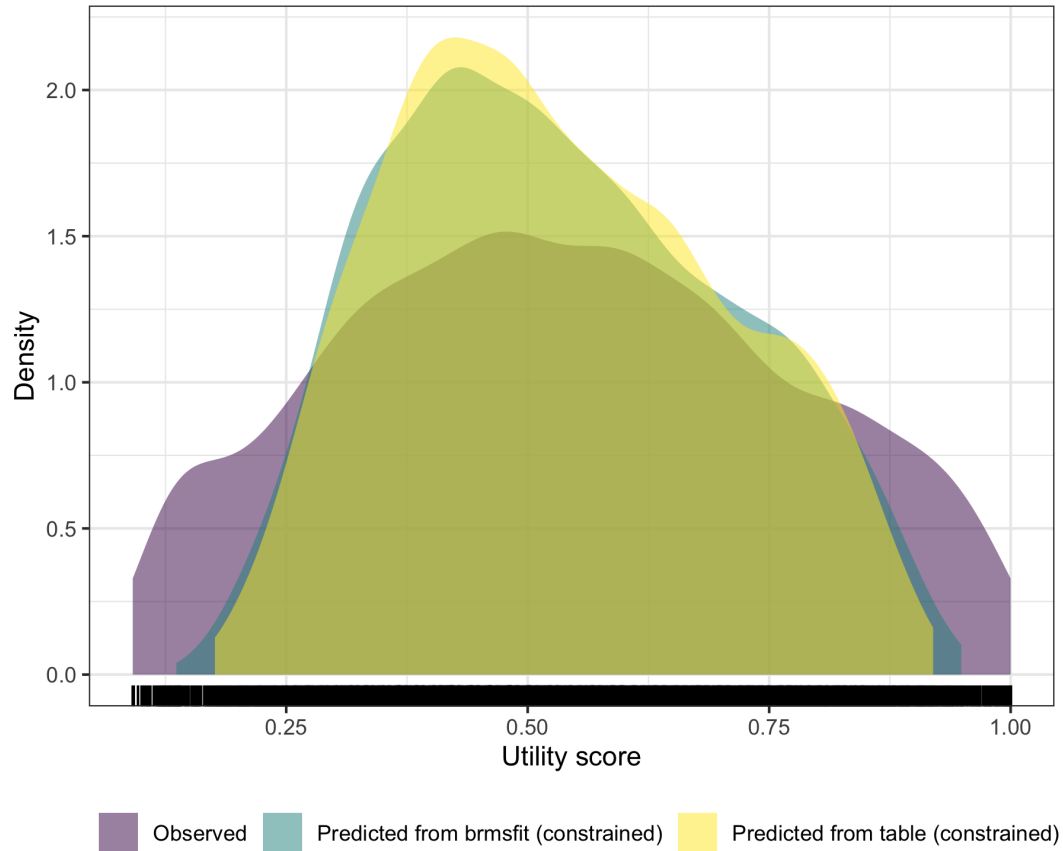


Figure 229: K10 with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

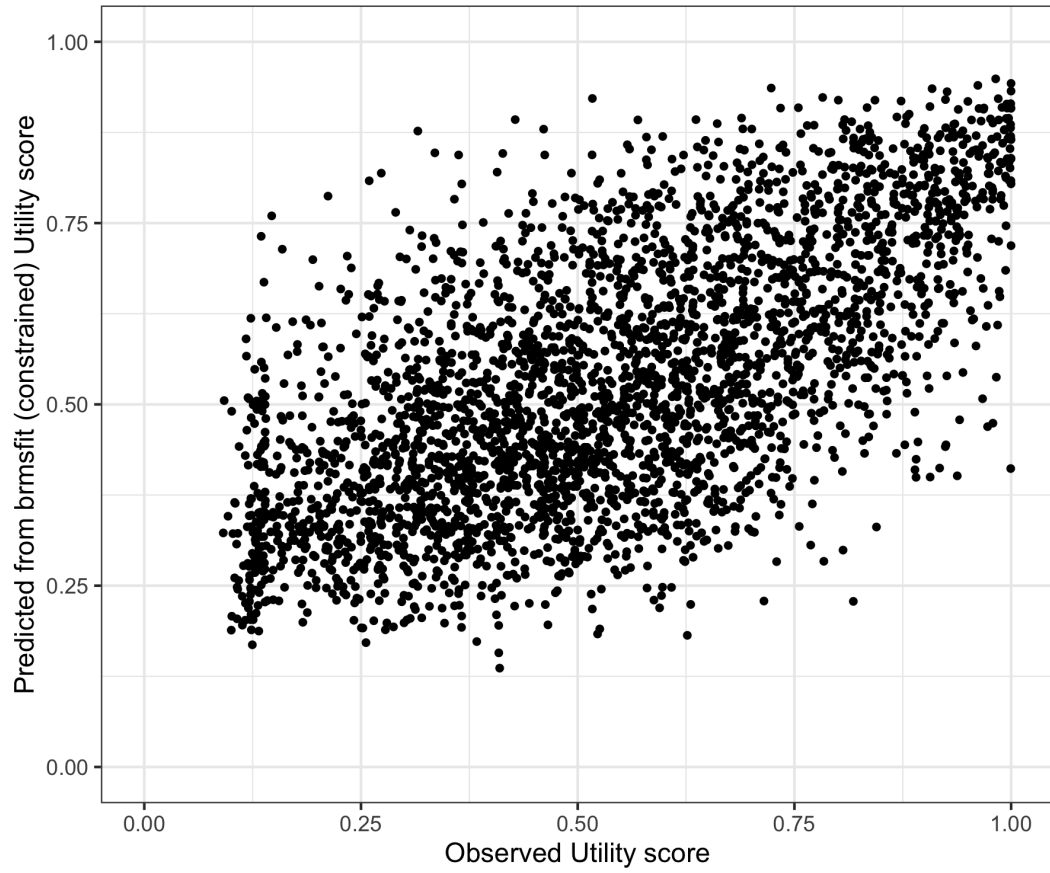


Figure 230: K10 with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

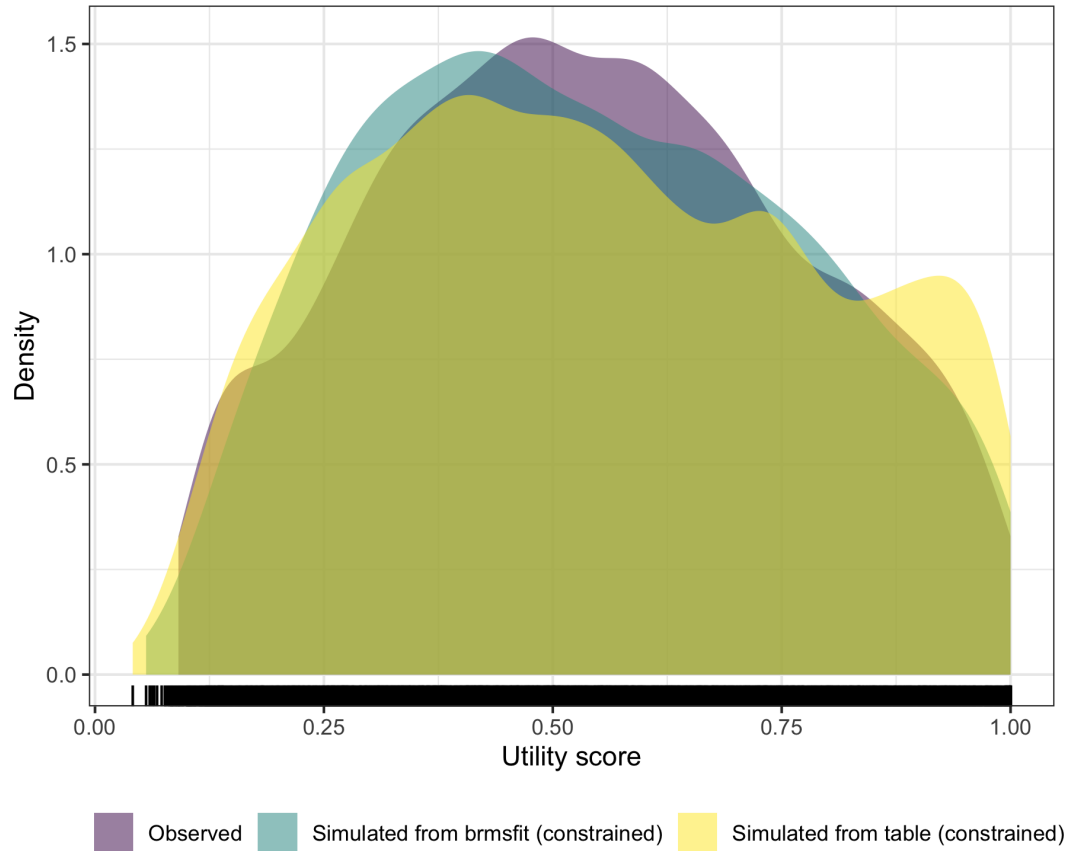


Figure 231: K10 with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

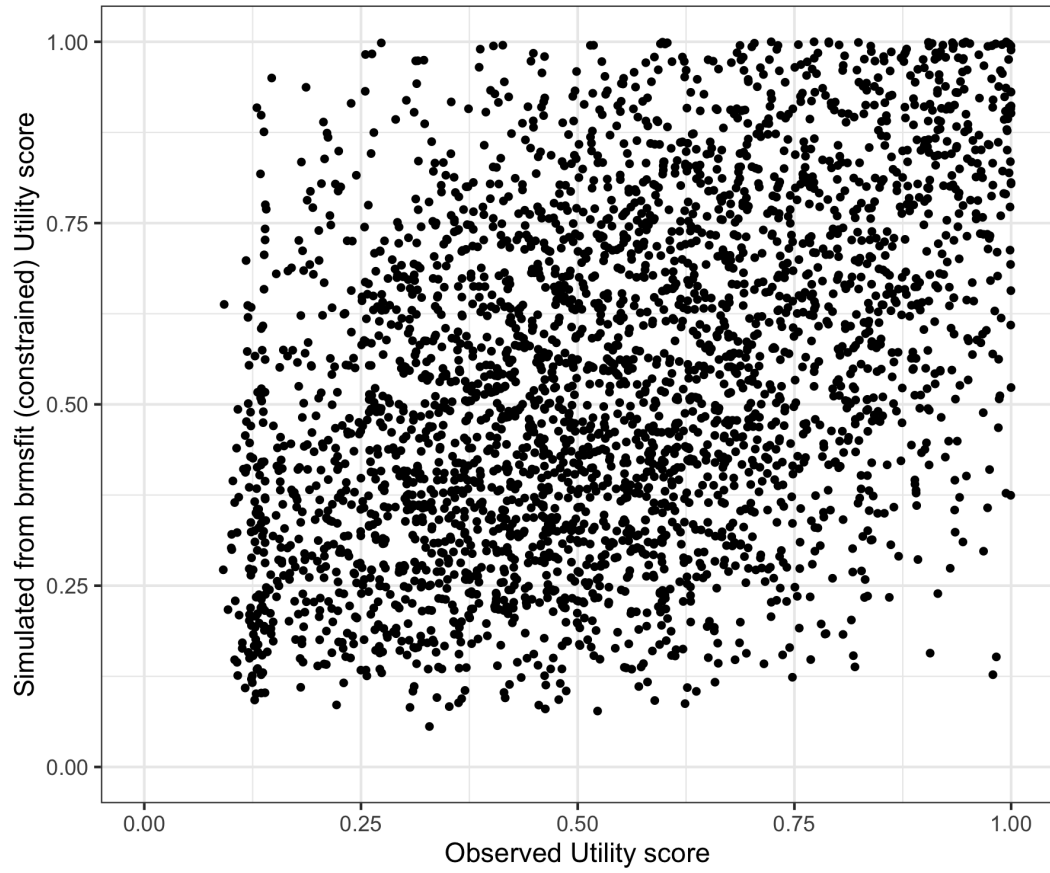


Figure 232: K10 with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

25 SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); and - cdaysoor (days out of role). The catalogue reference for this model is SOFAS_cdaysoor_1_GLM_GSN_LOG.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 1 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>

Table 49: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3294)							
sd(Intercept)	0.30	0.41	0.00	1.22	2.21	5	11
Population-Level Effects:							
Intercept	-0.41	0.47	-0.82	0.43	2.07	5	24
SOFAS_scaled	-0.09	0.79	-1.38	0.58	2.09	5	27
cdaysoor	-0.01	0.00	-0.01	-0.00	1.70	6	17
Family Specific Parameters:							
sigma	1.18	1.65	0.20	4.39	2.08	5	11

Formula: AQOL6D ~SOFAS_scaled + cdaysoor + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 50: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.26	0.13	0.156 , 0.494
RMSE	1.30	1.71	0.295 , 2.679

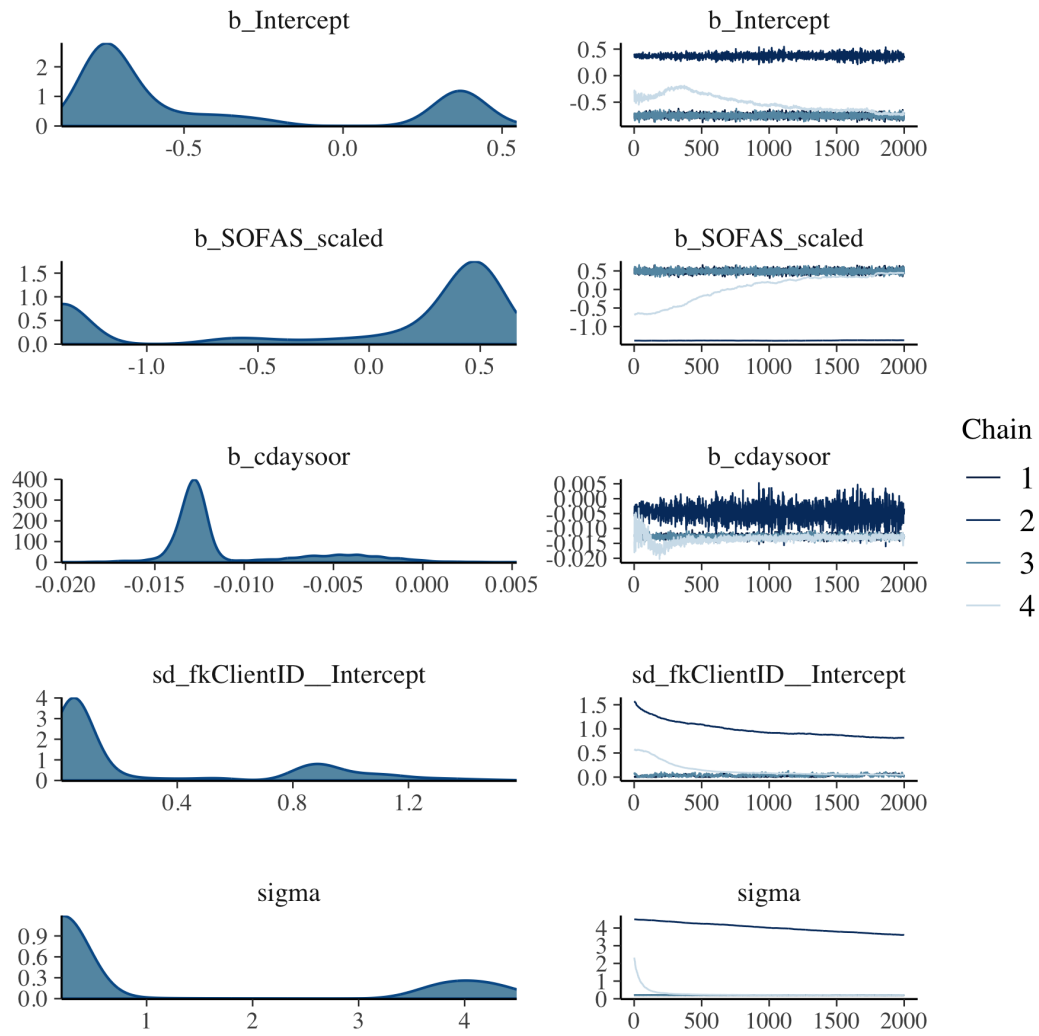


Figure 233: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link population and group level effects

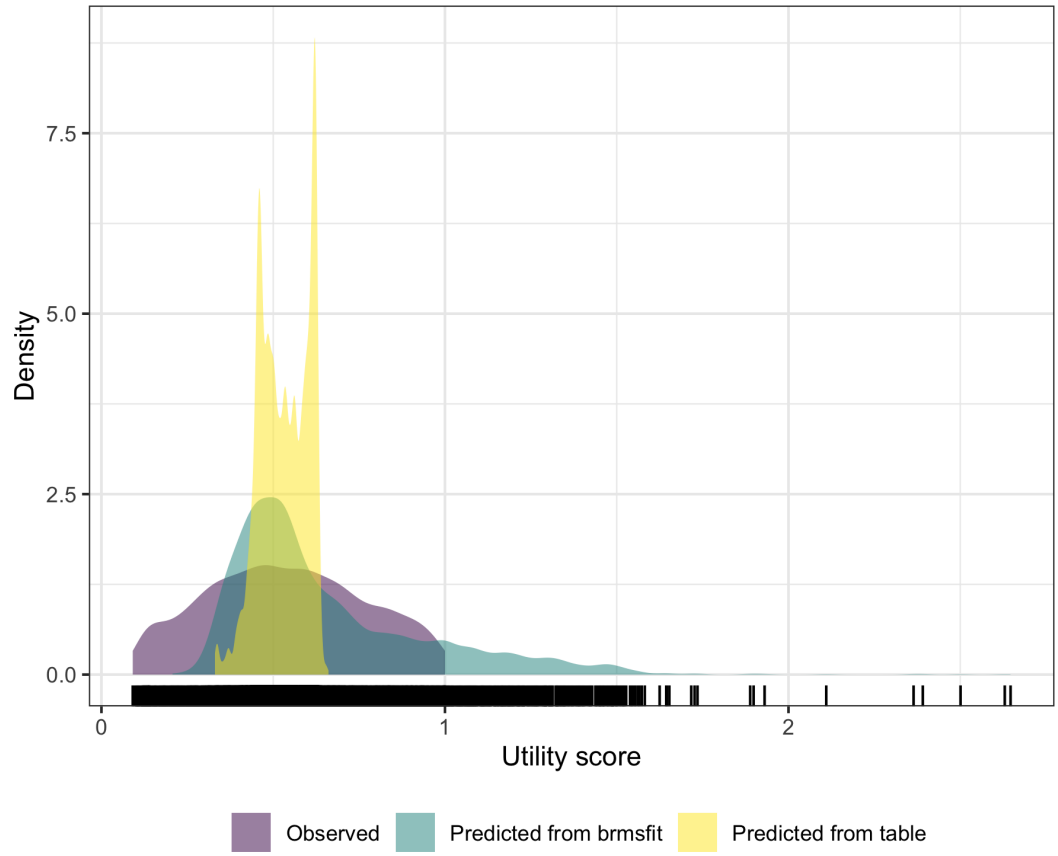


Figure 234: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

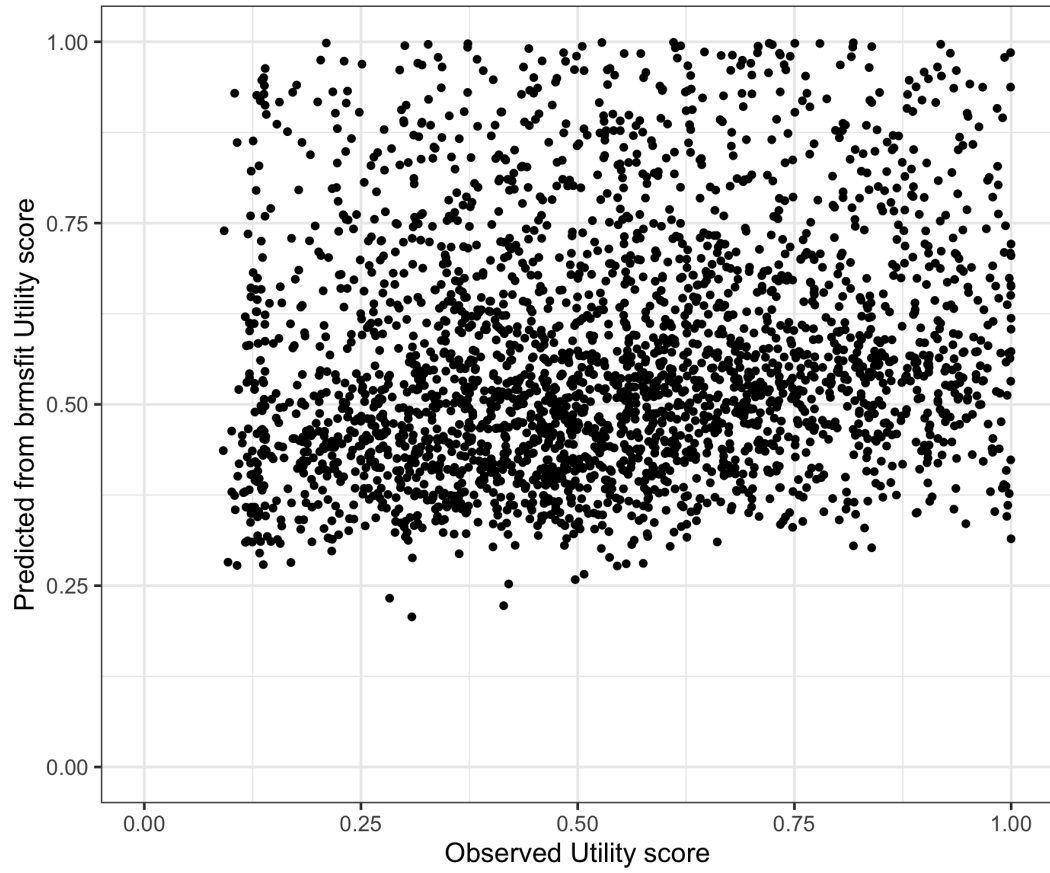


Figure 235: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

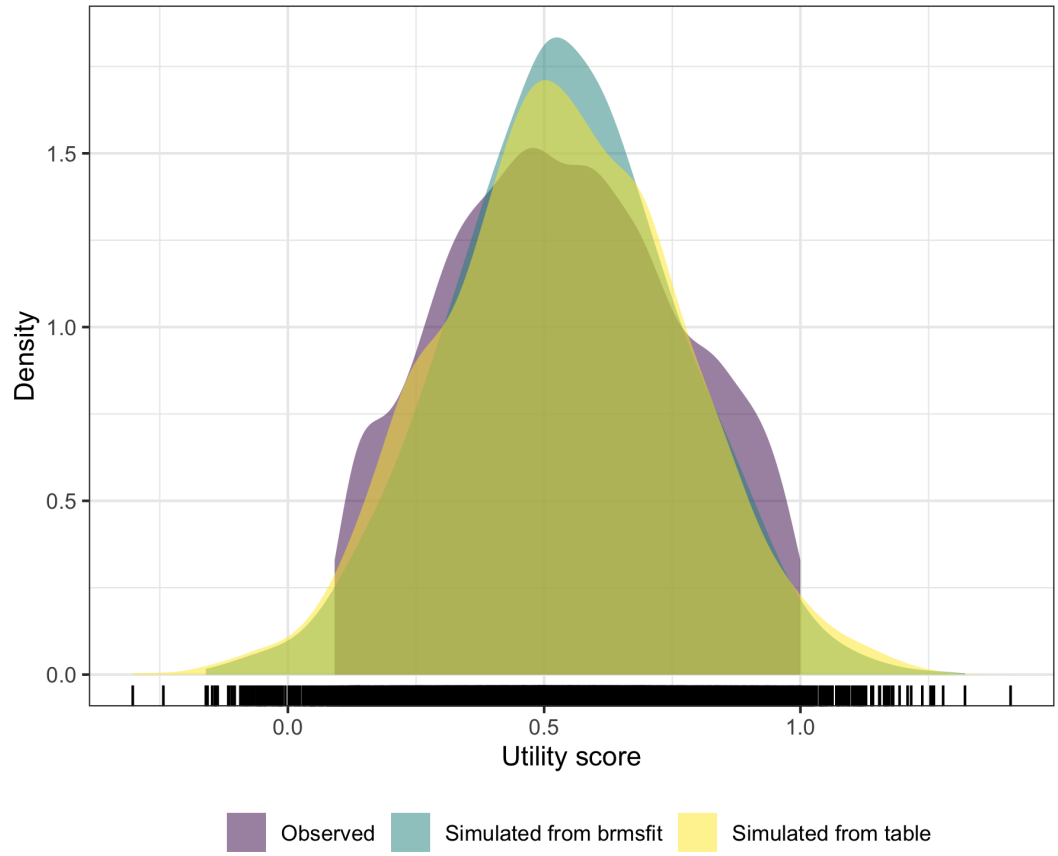


Figure 236: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

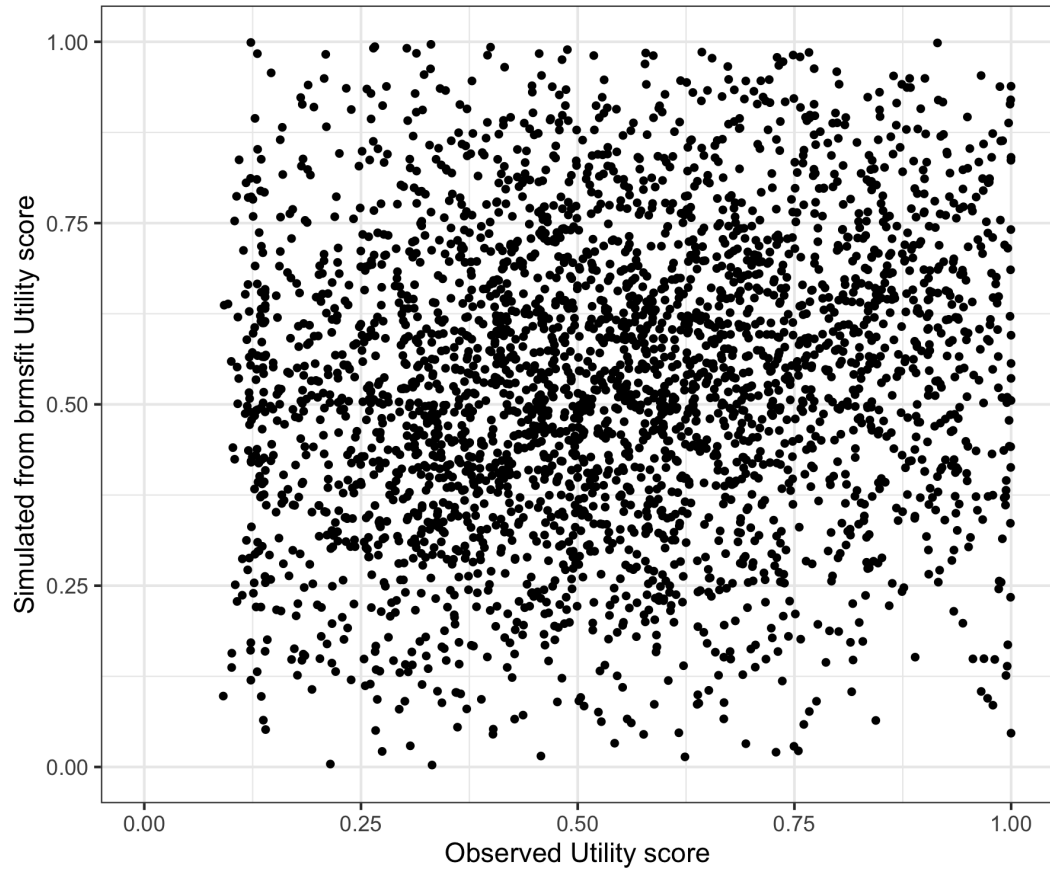


Figure 237: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

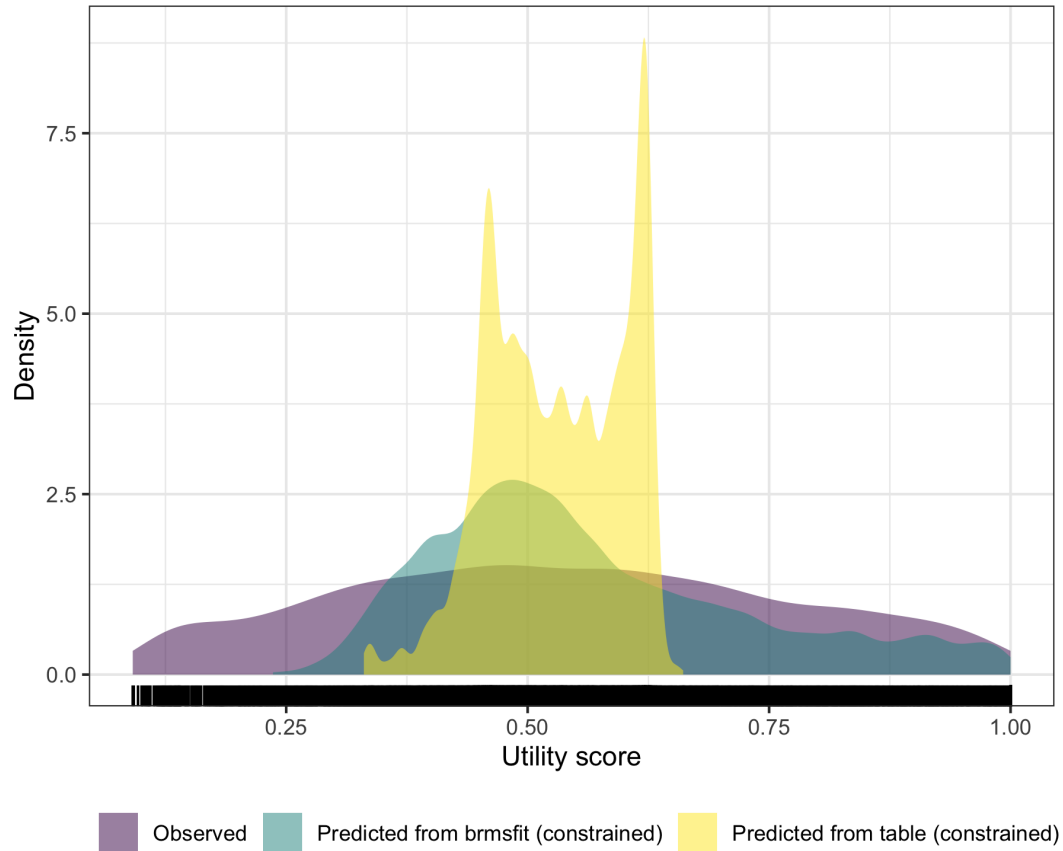


Figure 238: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

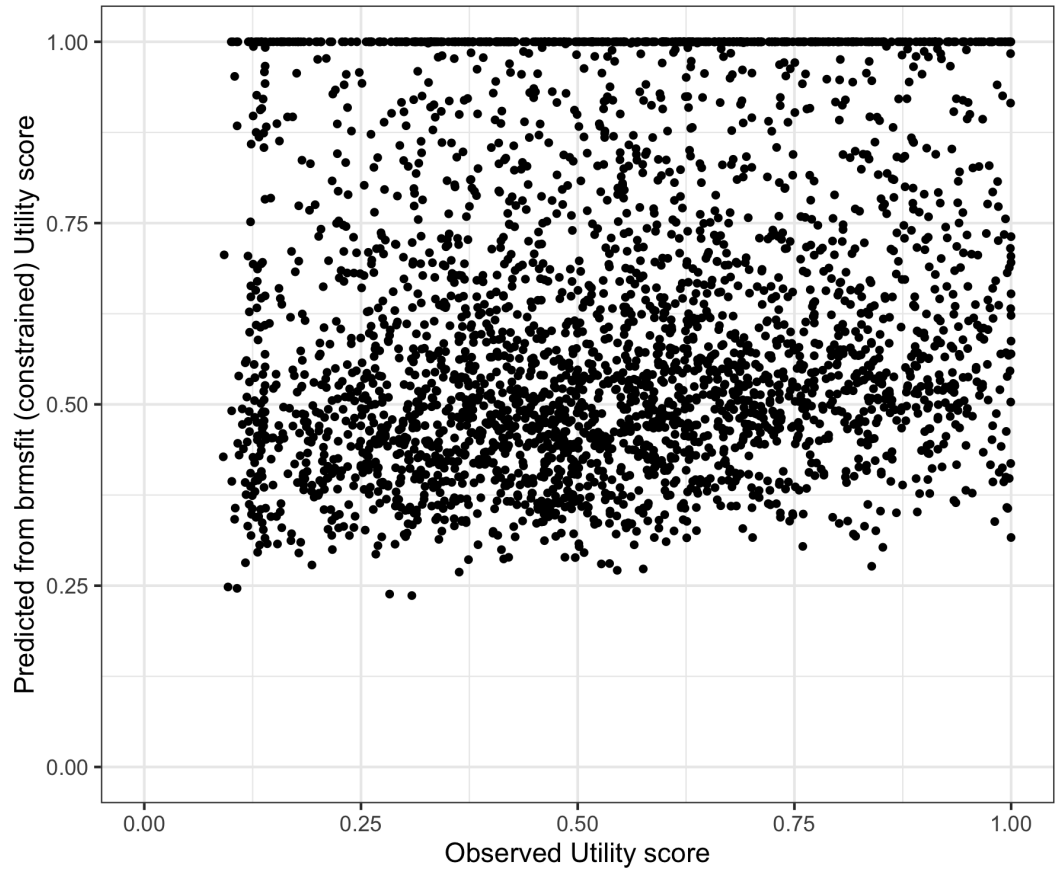


Figure 239: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

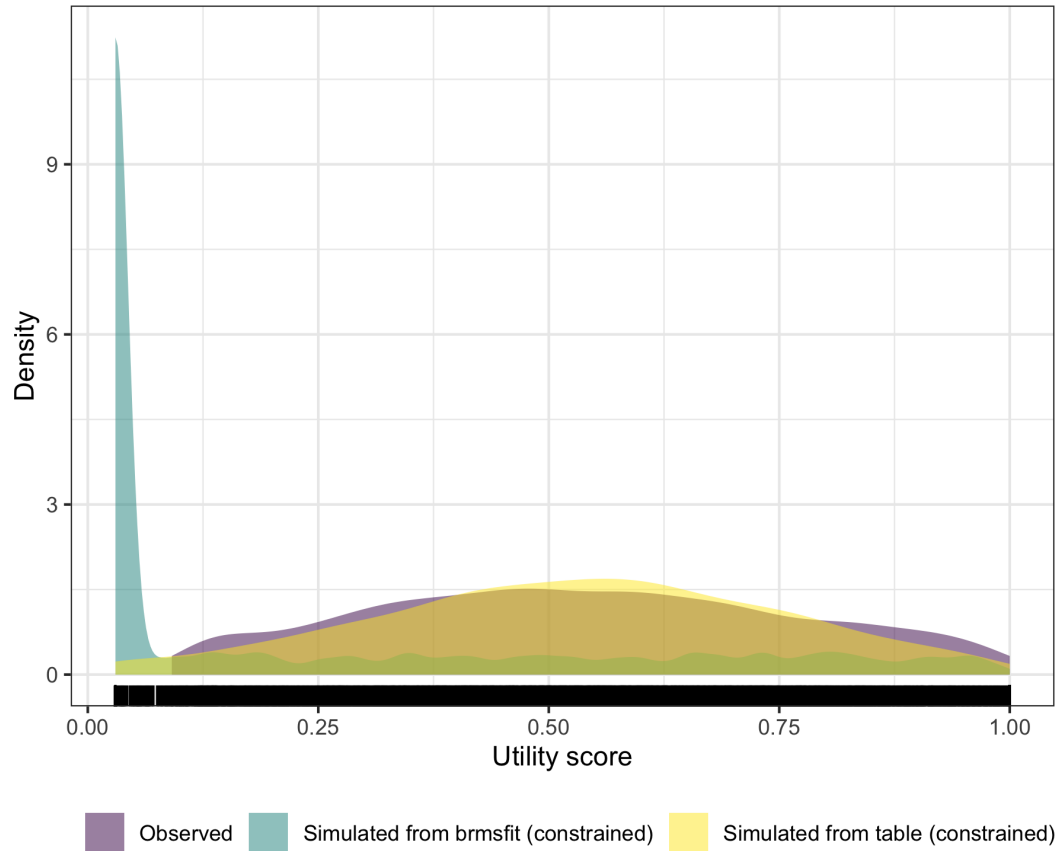


Figure 240: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

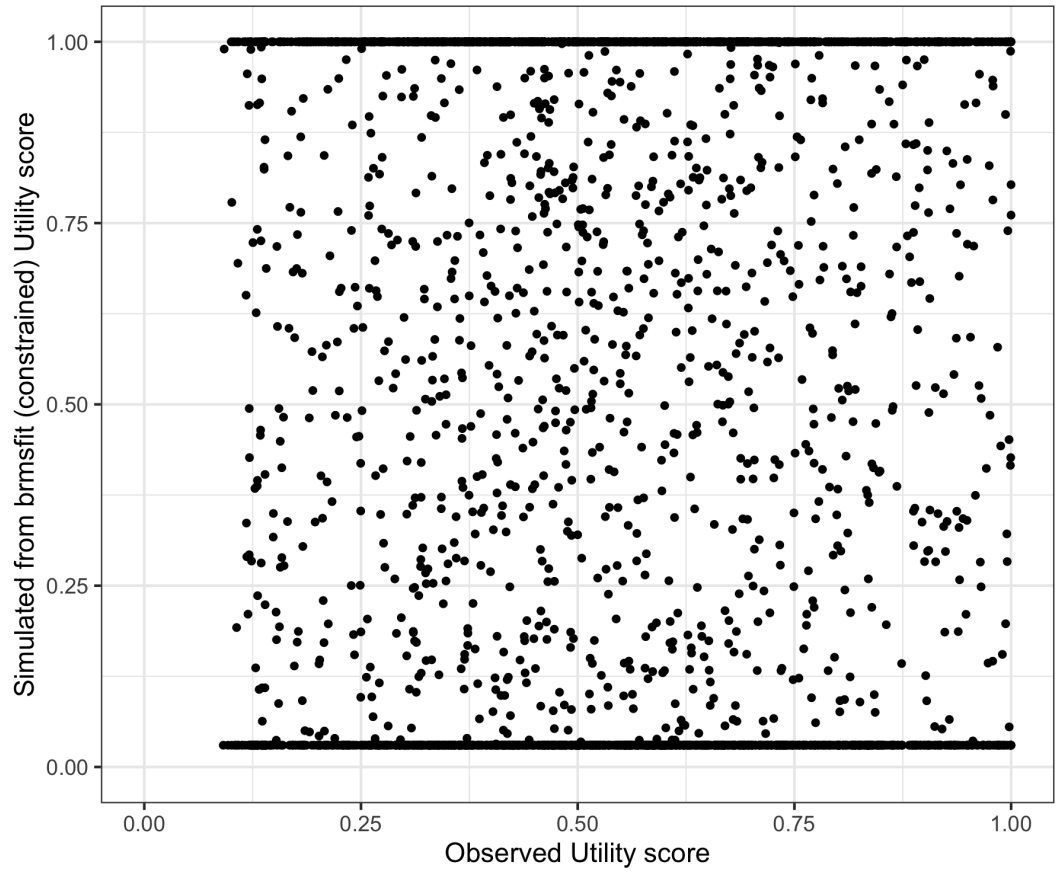


Figure 241: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

26 SOFAS with cdaysoor linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); and - cdaysoor (days out of role). The catalogue reference for this model is SOFAS_cdaysoor_1_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 51: SOFAS with cdaysoor linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3294)							
sd(Intercept)	0.47	0.18	0.04	0.67	1.41	9	31
Population-Level Effects:							
Intercept	-0.46	0.06	-0.58	-0.34	1.00	3 140	4 075
SOFAS_scaled	0.78	0.08	0.61	0.94	1.00	3 059	4 028
cdaysoor	-0.02	0.00	-0.02	-0.02	1.00	5 163	5 858
Family Specific Parameters:							
sigma	0.51	0.14	0.28	0.73	1.41	9	37

Formula: AQOL6D_CLL ~SOFAS_scaled + cdaysoor + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 52: SOFAS with cdaysoor linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.55	0.23	0.151 , 0.877
RMSE	1.08	0.04	1.052 , 1.119

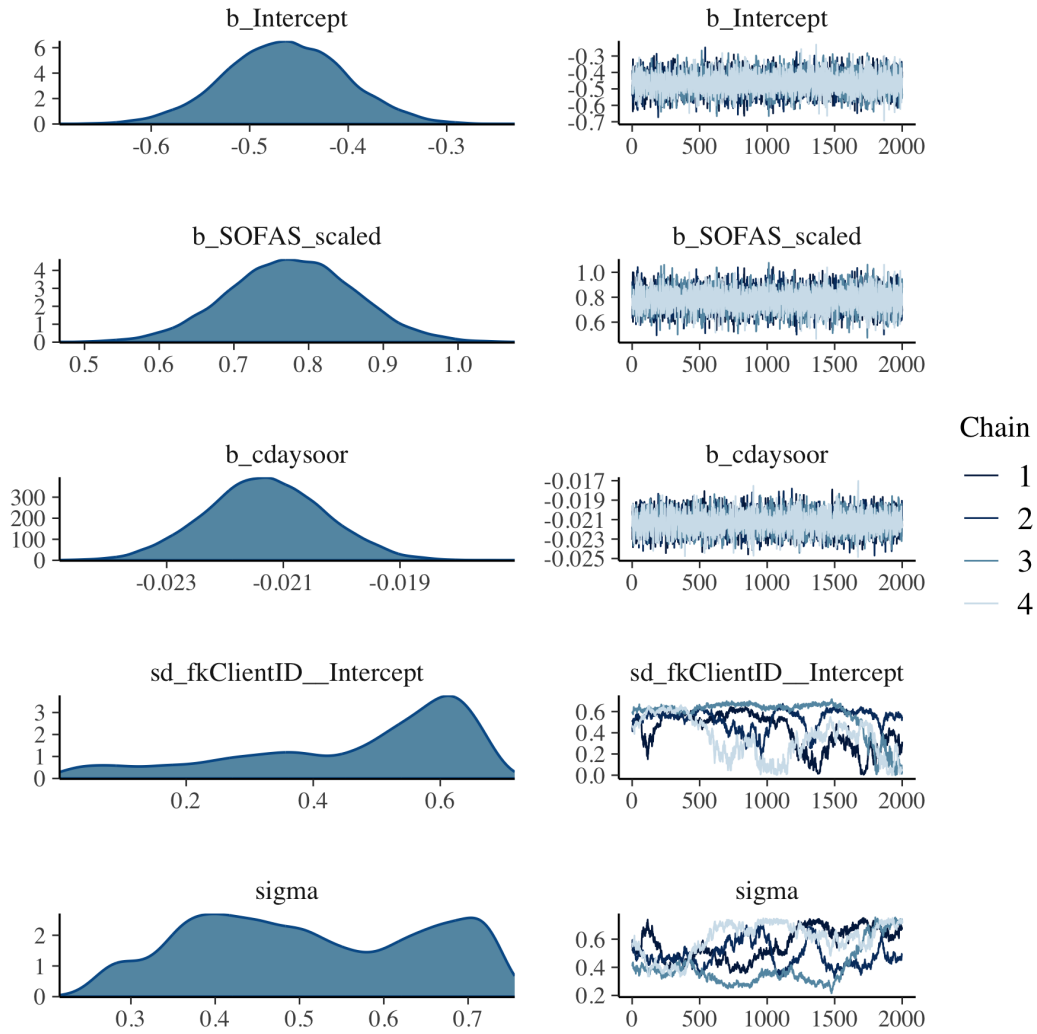


Figure 242: SOFAS with cdaysoor linear mixed model with complementary log log transformation population and group level effects

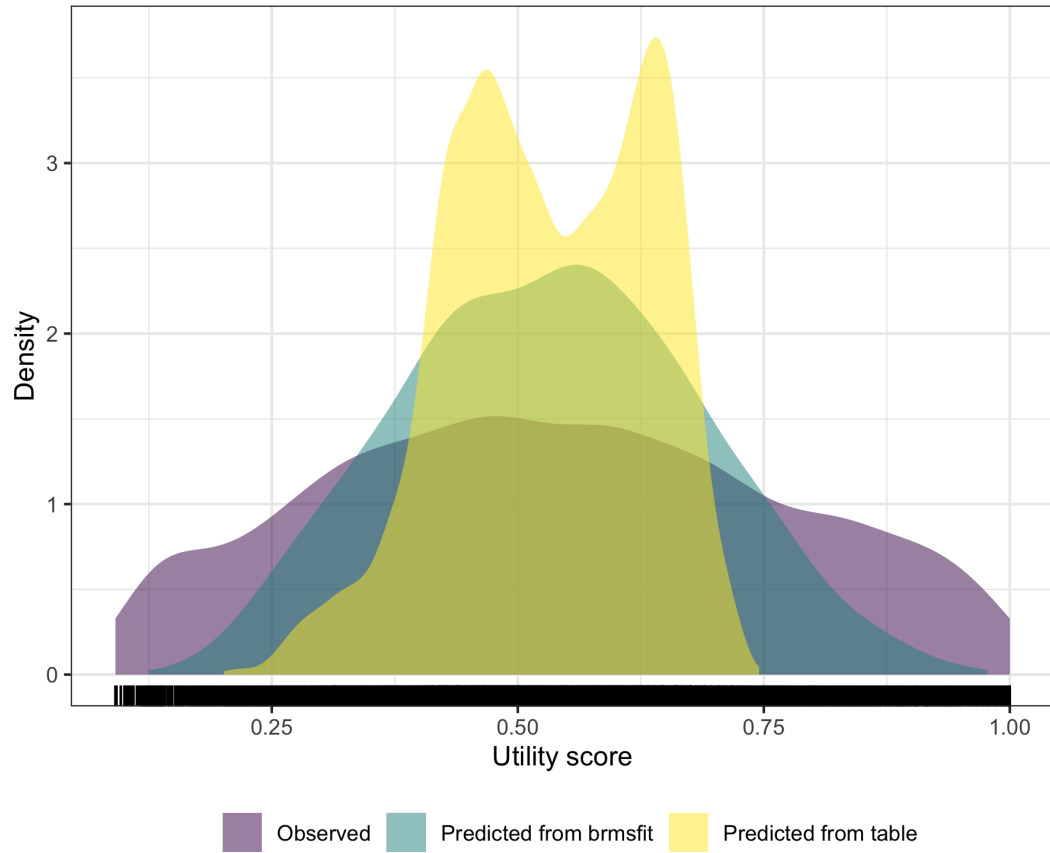


Figure 243: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

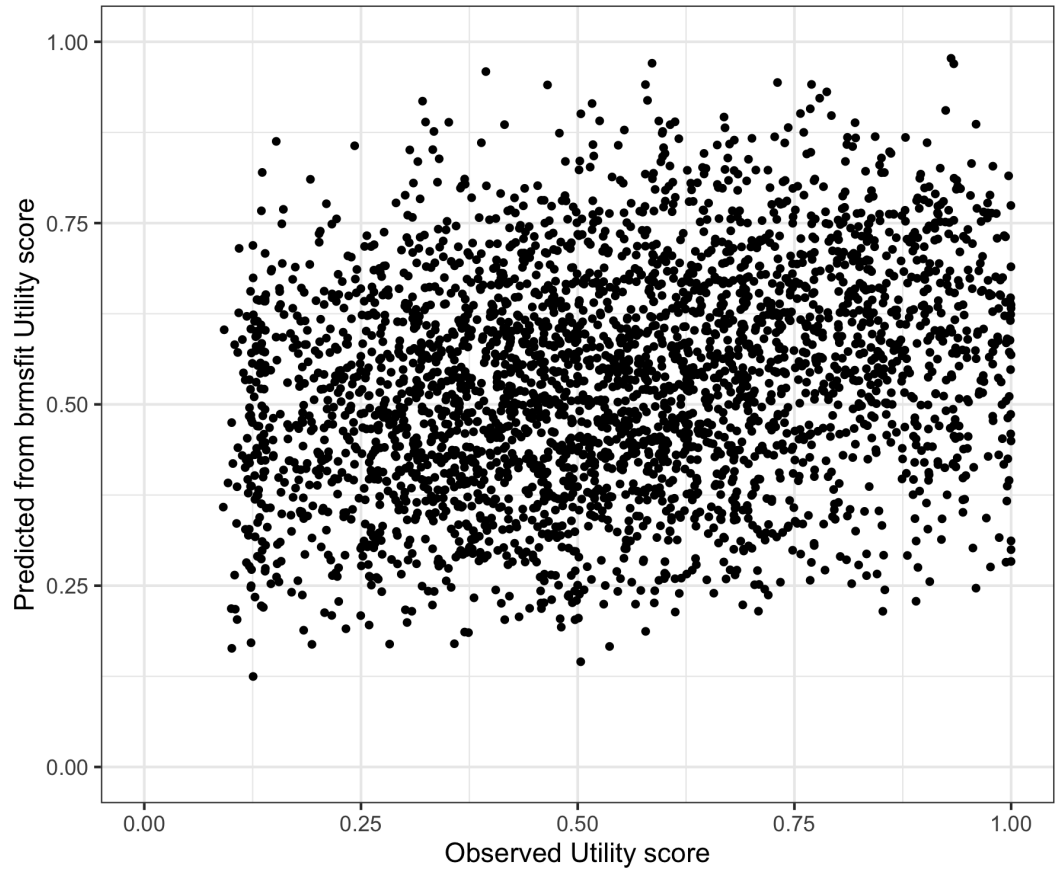


Figure 244: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

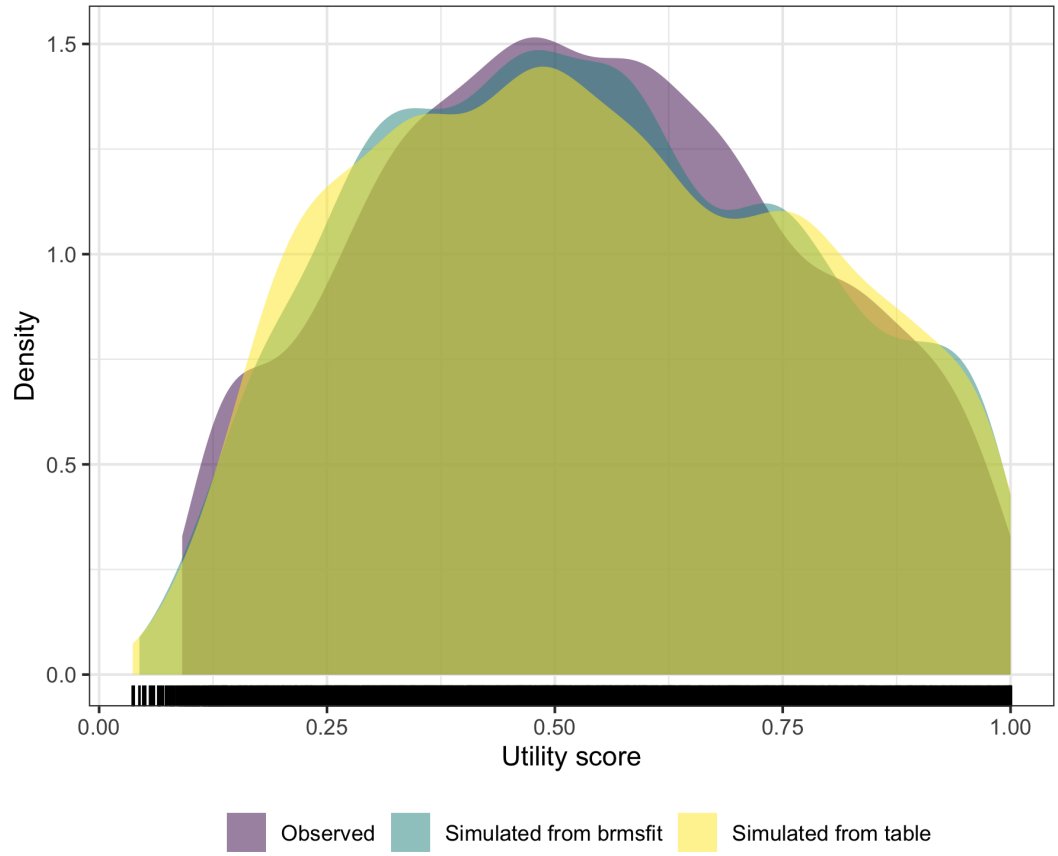


Figure 245: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

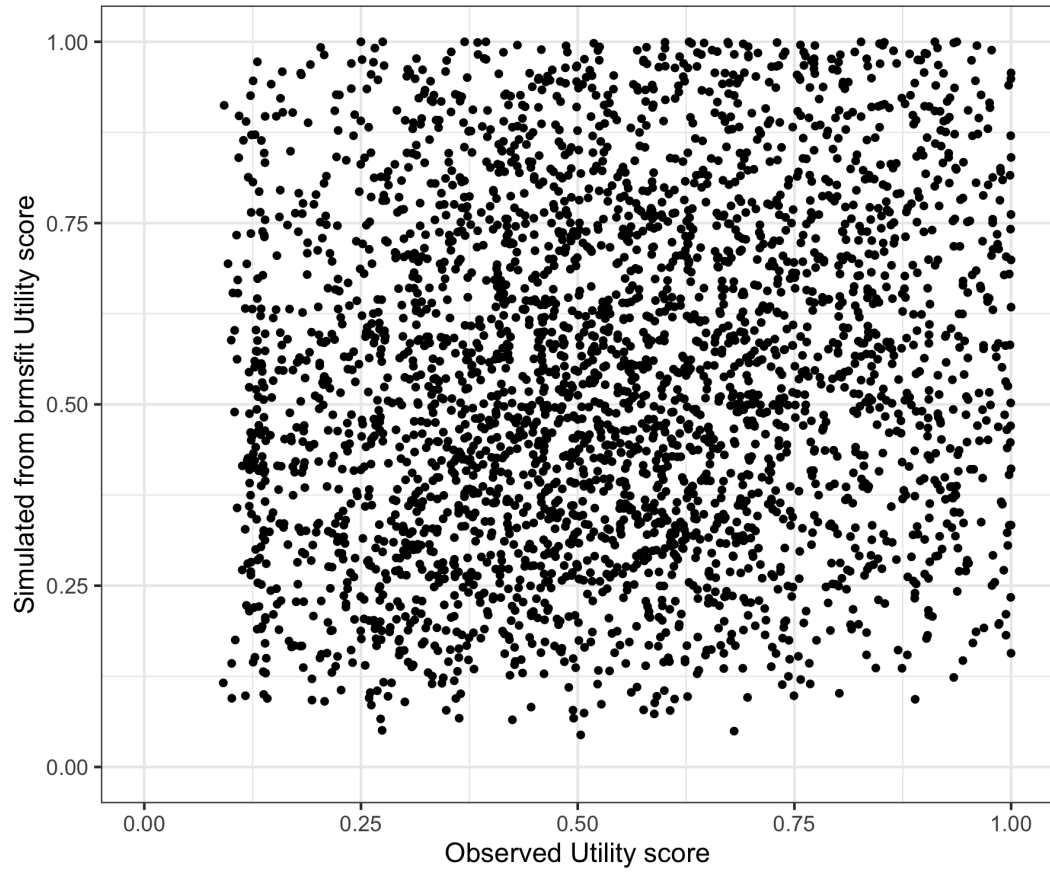


Figure 246: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

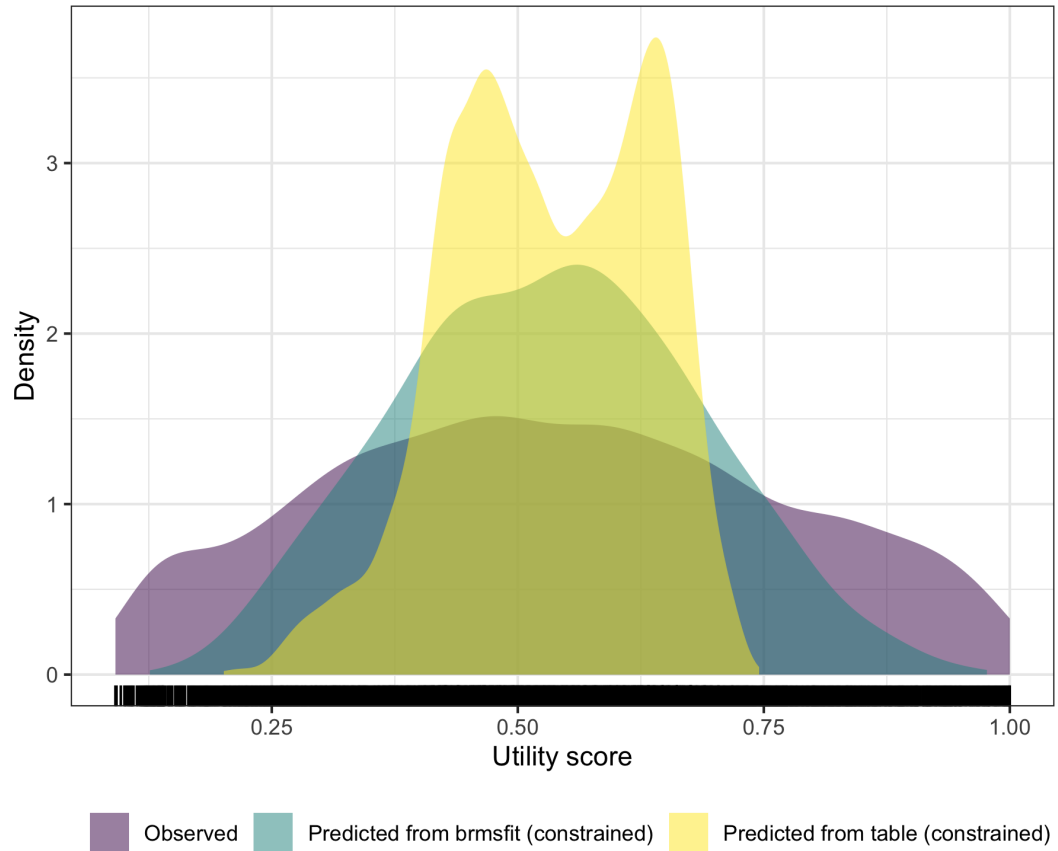


Figure 247: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

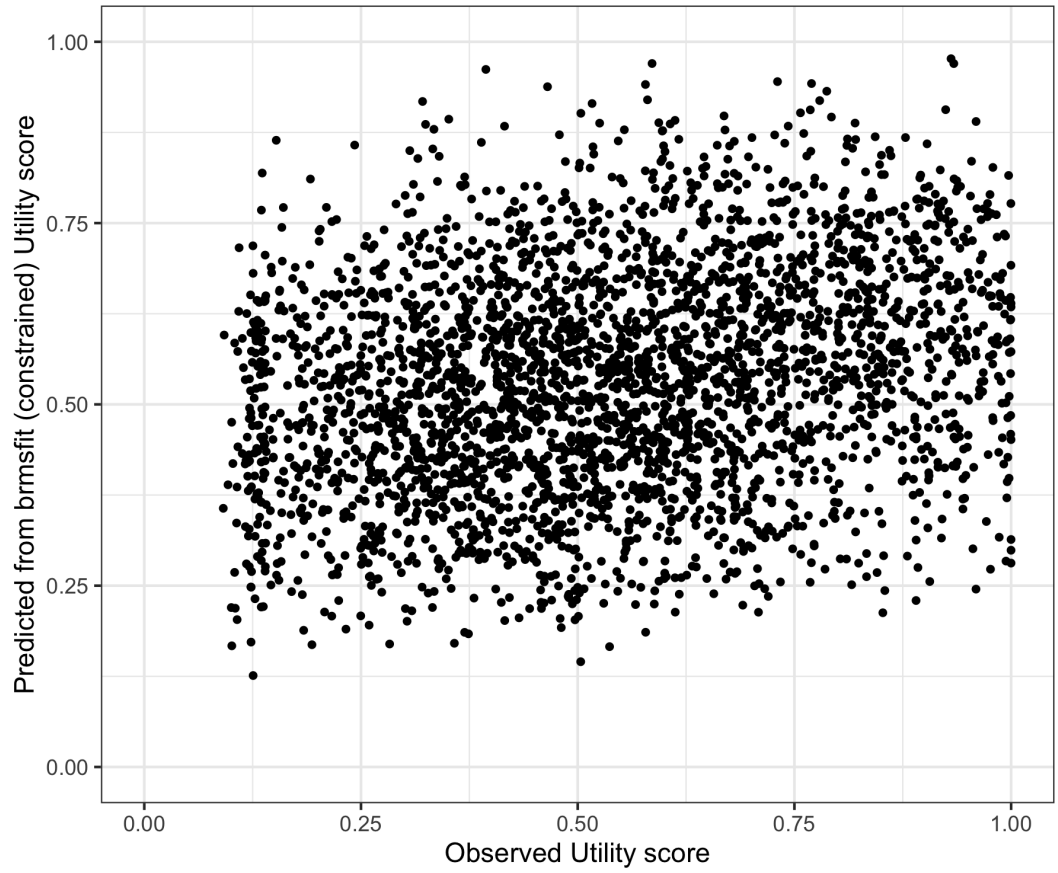


Figure 248: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

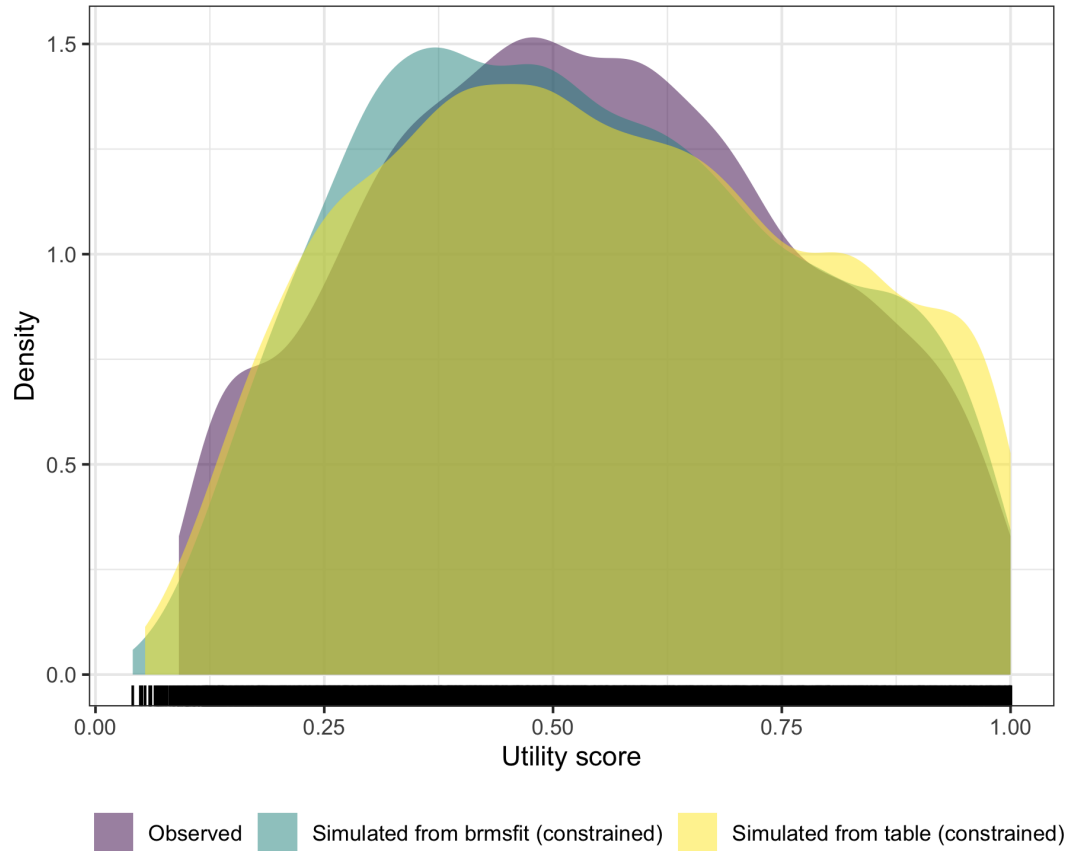


Figure 249: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

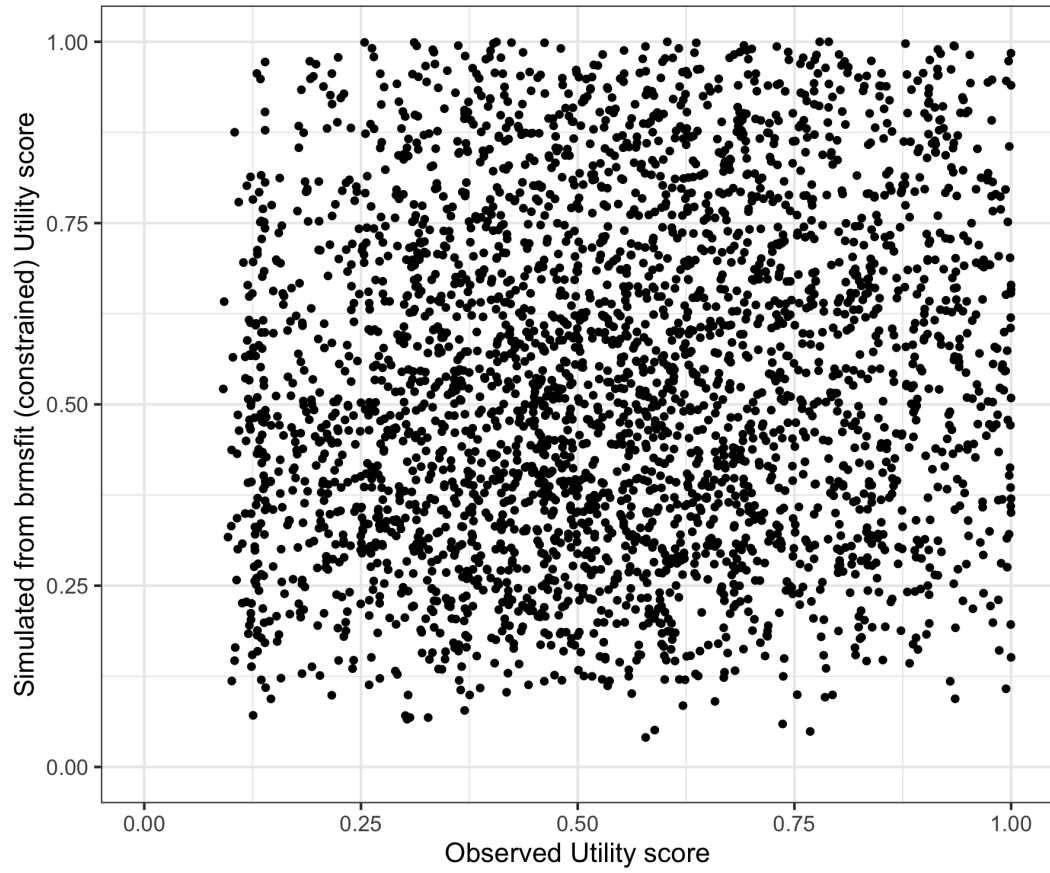


Figure 250: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

27 SOFAS with dage generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); and - dage (age). The catalogue reference for this model is SOFAS_dage_1_GLM_GSN_LOG.

Warning: There were 198 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>

Table 53: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3298)							
sd(Intercept)	0.06	0.04	0.00	0.16	1.02	171	141
Population-Level Effects:							
Intercept	-0.81	0.05	-0.91	-0.70	1.00	7 860	6 332
SOFAS_scaled	0.64	0.06	0.53	0.76	1.00	6 330	5 061
dage	-0.01	0.00	-0.02	-0.01	1.00	6 578	5 470
Family Specific Parameters:							
sigma	0.22	0.01	0.20	0.23	1.02	205	136

Formula: AQOL6D ~SOFAS_scaled + dage + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 54: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.09	0.04	0.049 , 0.207
RMSE	0.31	0.01	0.306 , 0.315

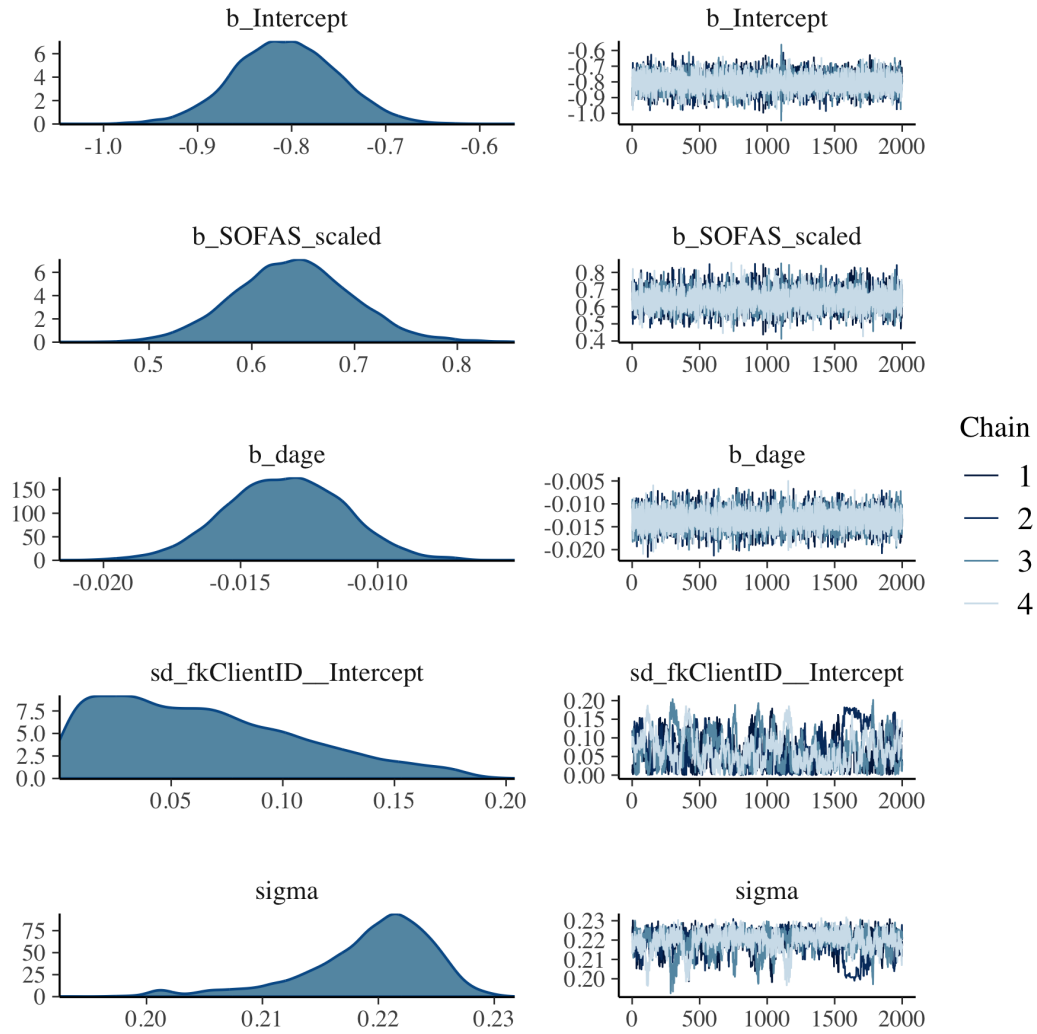


Figure 251: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link population and group level effects

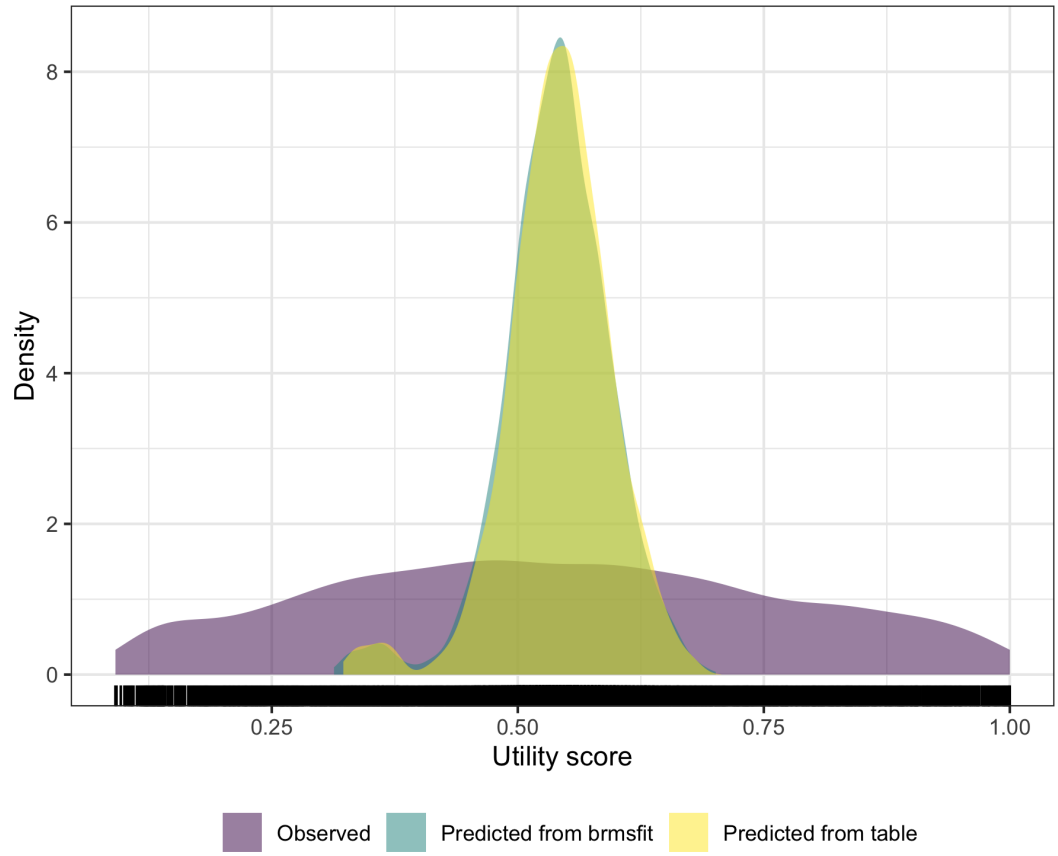


Figure 252: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

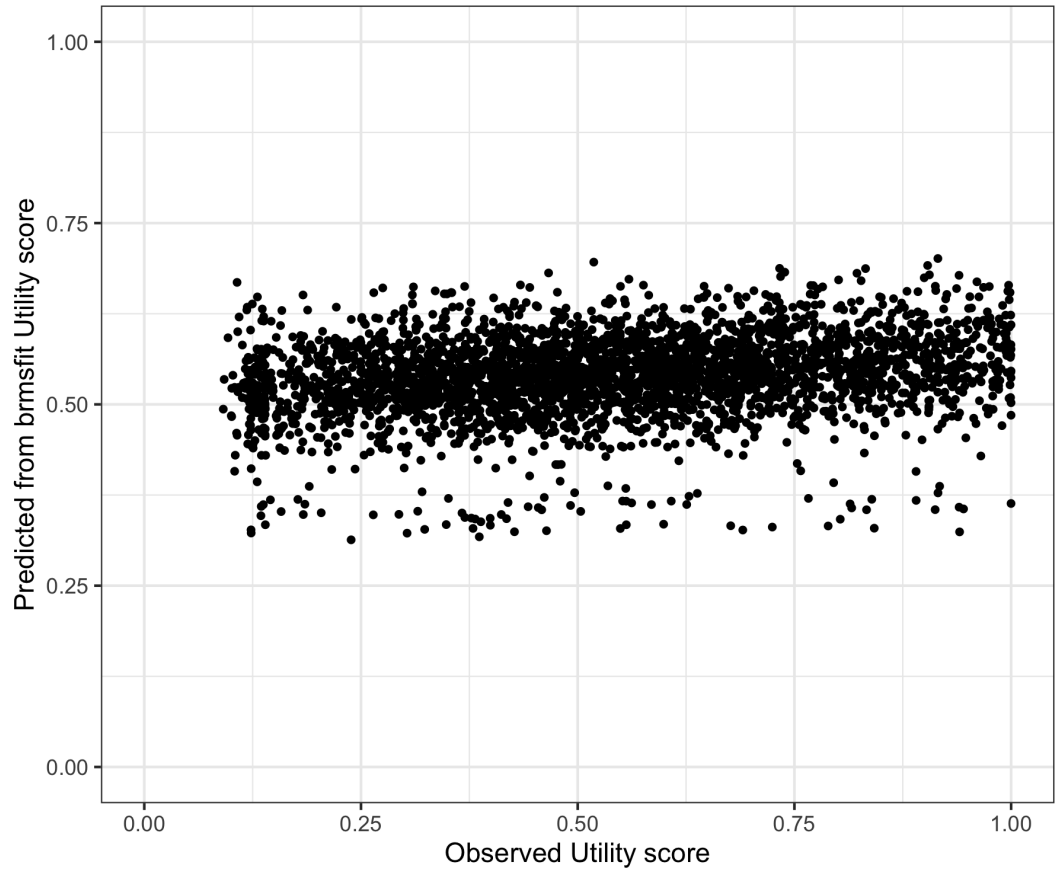


Figure 253: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

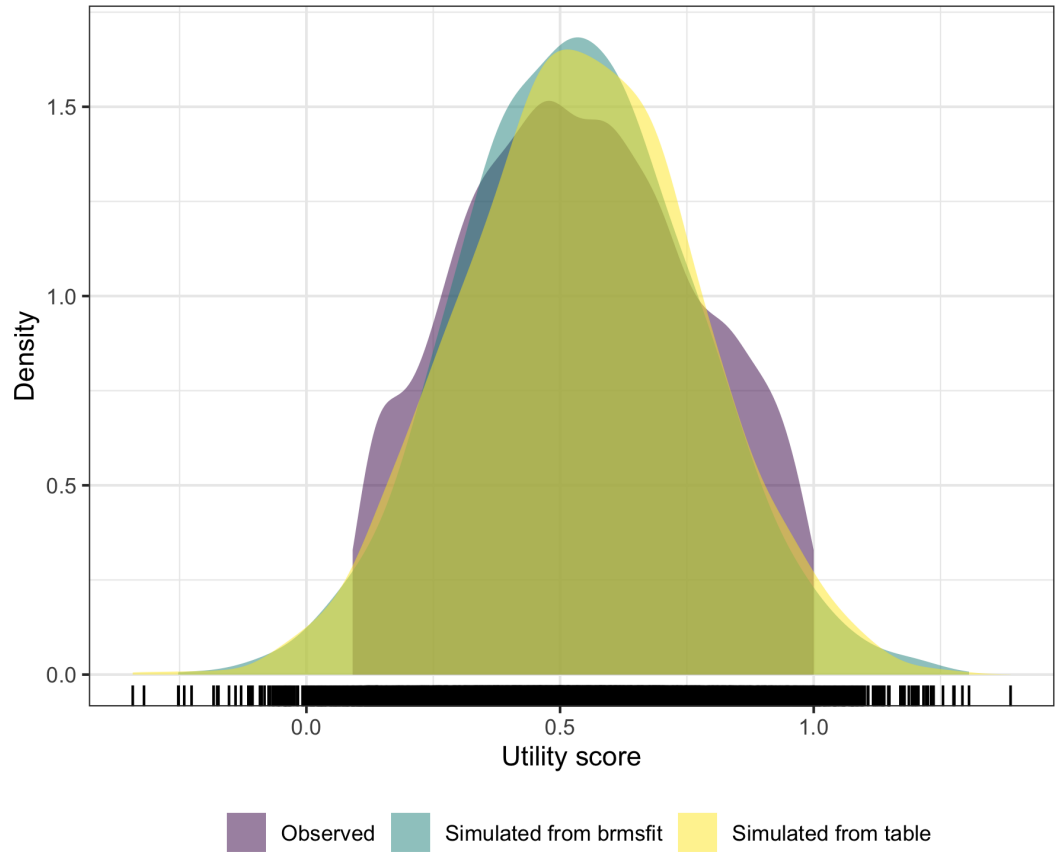


Figure 254: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

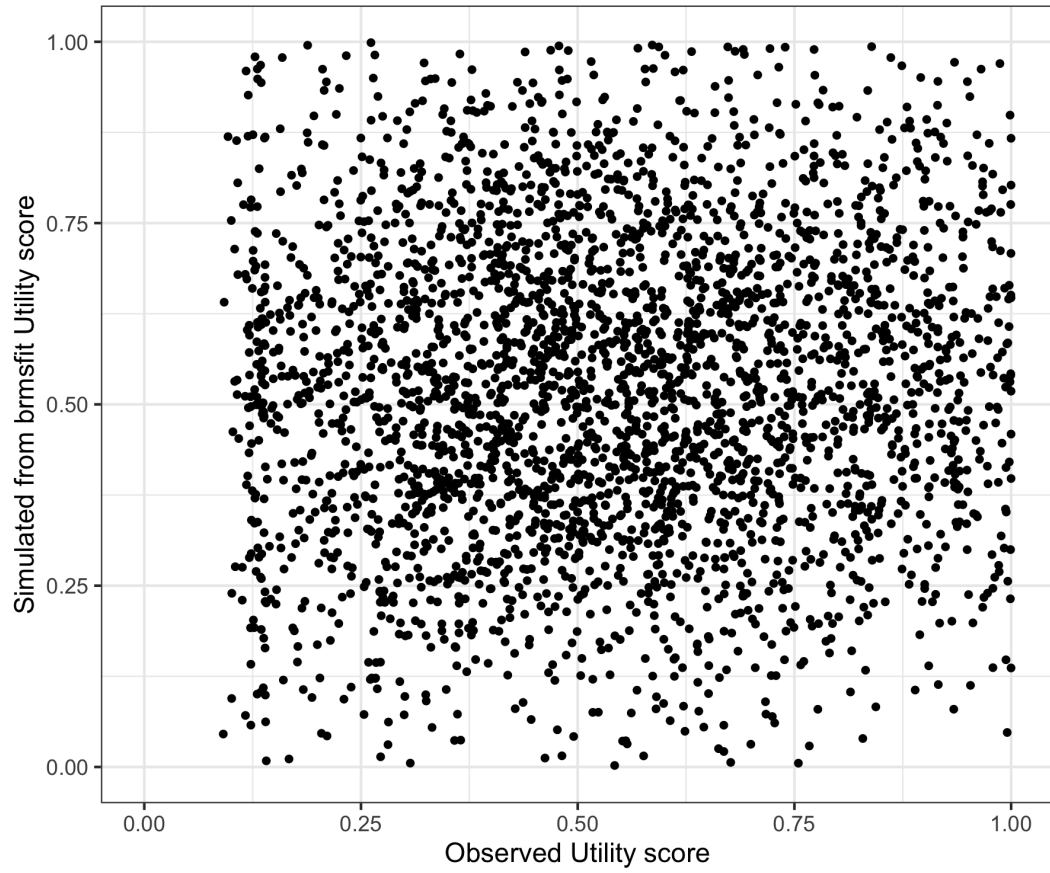


Figure 255: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

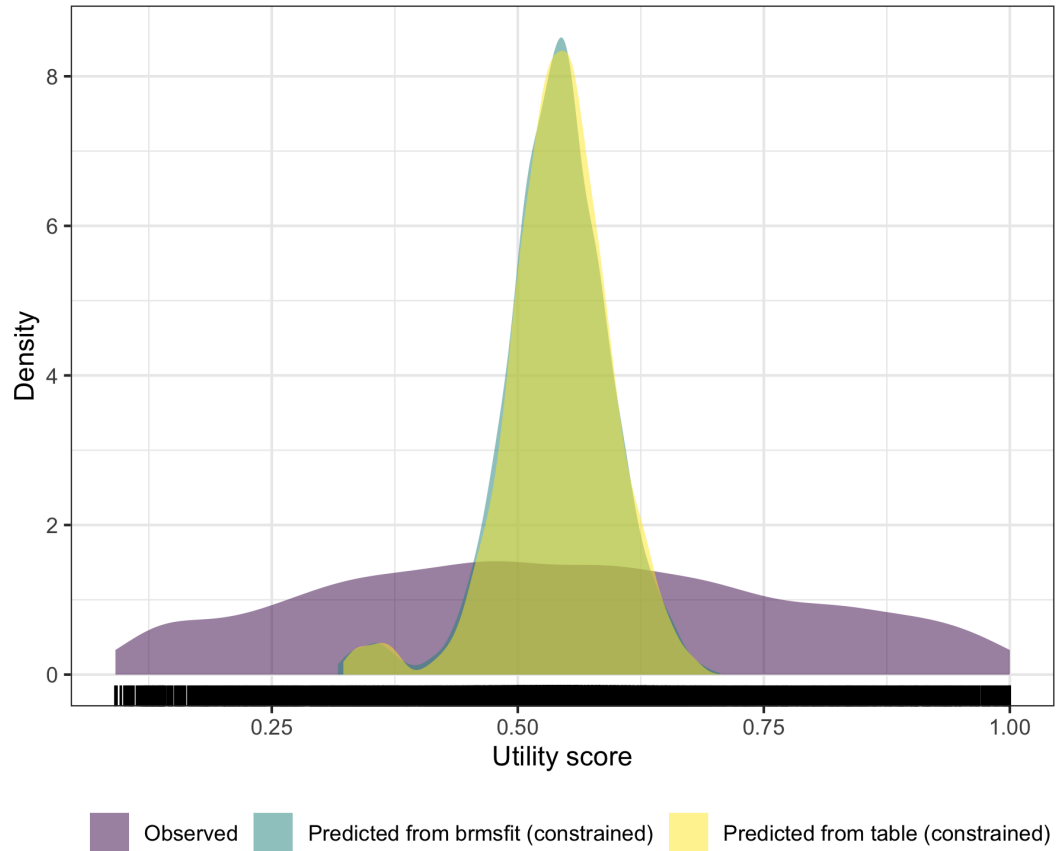


Figure 256: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

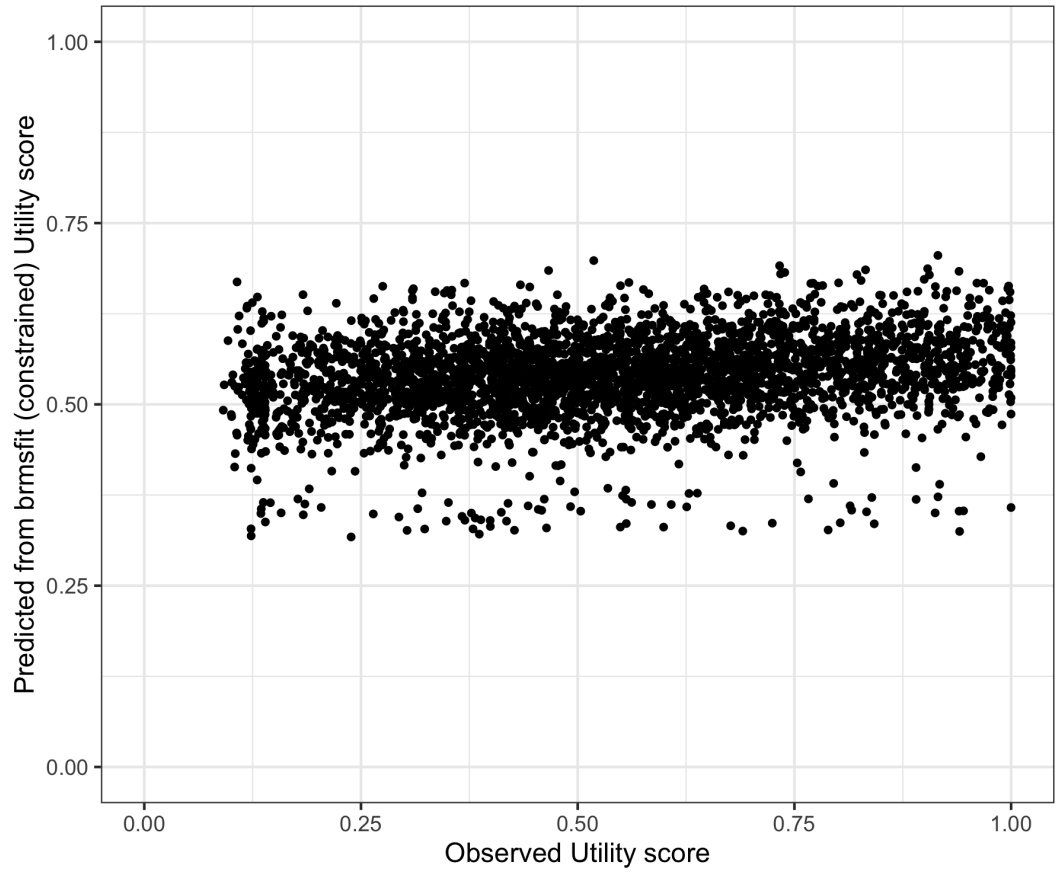


Figure 257: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

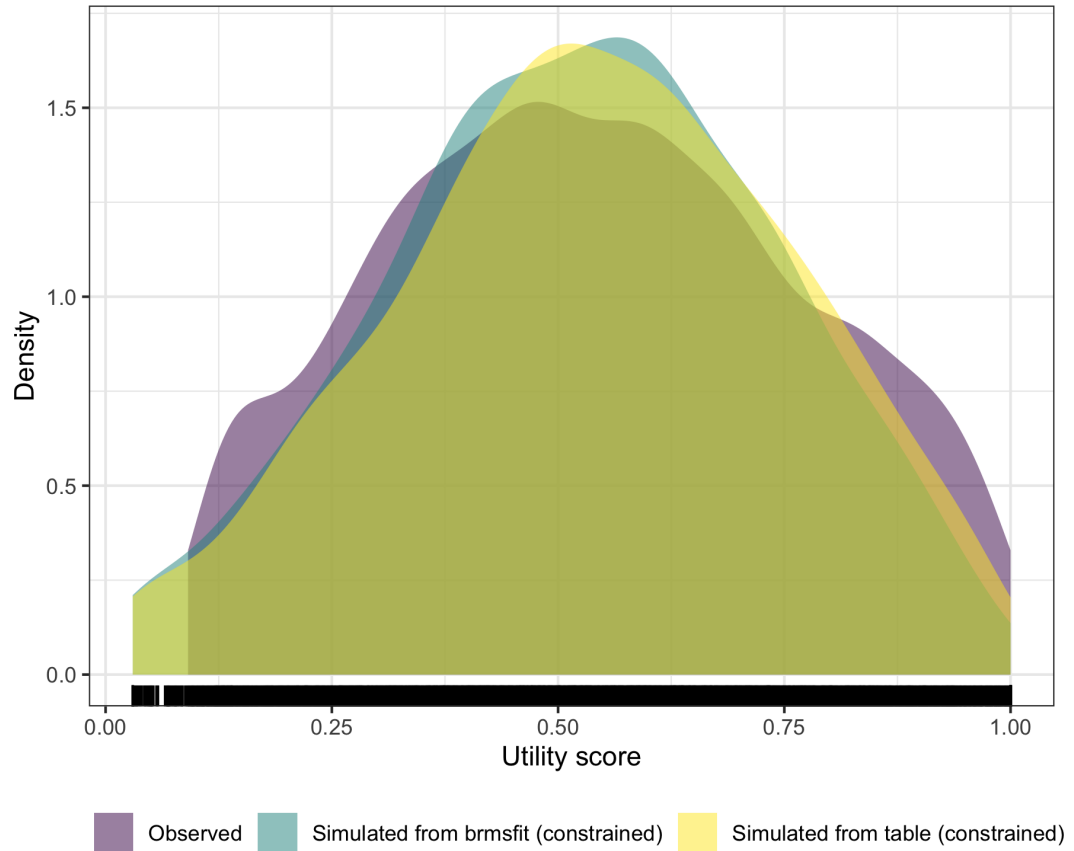


Figure 258: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

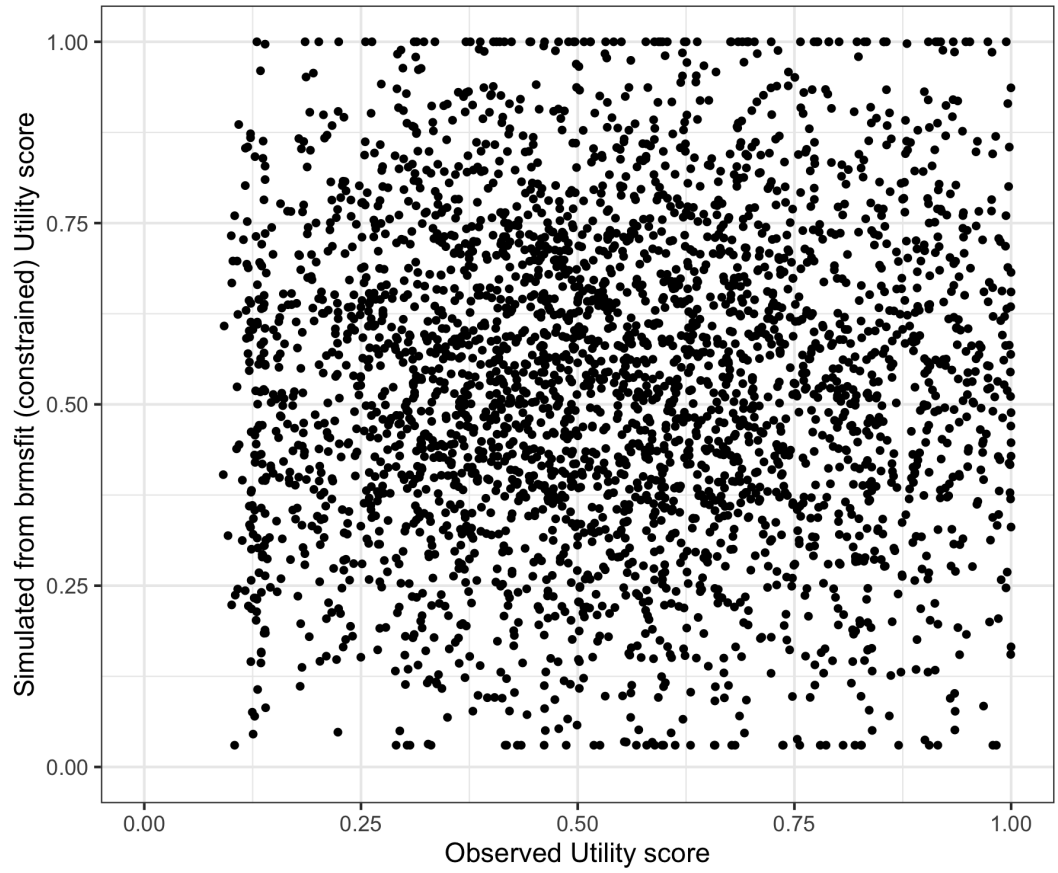


Figure 259: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

28 SOFAS with dage linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); and - dage (age). The catalogue reference for this model is SOFAS_dage_1_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Warning: There were 5 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>

Table 55: SOFAS with dage linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3298)							
sd(Intercept)	0.49	0.24	0.02	0.76	1.95	6	19
Population-Level Effects:							
Intercept	-0.46	0.09	-0.64	-0.29	1.00	2 050	3 748
SOFAS_scaled	0.96	0.09	0.79	1.14	1.00	2 484	4 087
dage	-0.03	0.00	-0.03	-0.02	1.00	2 468	3 255
Family Specific Parameters:							
sigma	0.51	0.20	0.16	0.78	1.96	5	17

Formula: AQOL6D_CLL ~SOFAS_scaled + dage + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 56: SOFAS with dage linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.52	0.32	0.047 , 0.961
RMSE	1.09	0.05	1.043 , 1.146

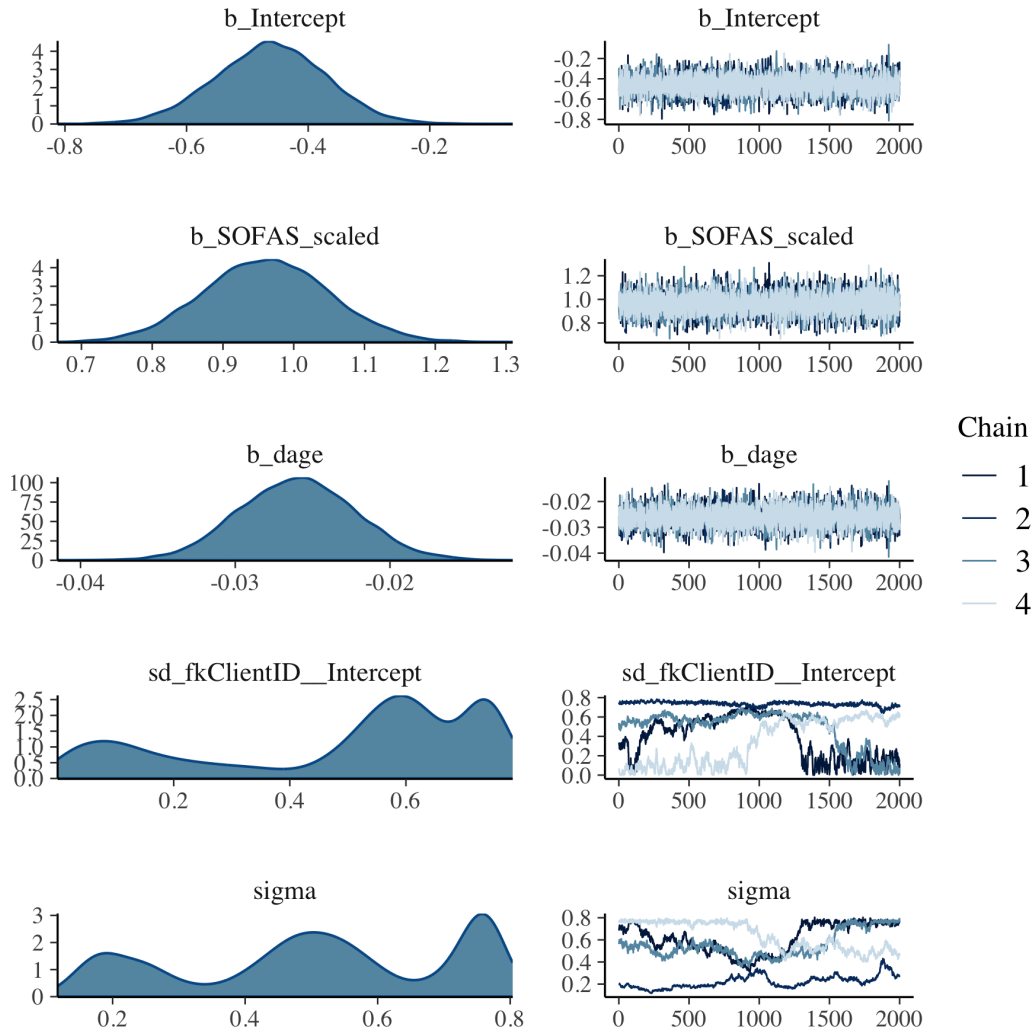


Figure 260: SOFAS with dage linear mixed model with complementary log log transformation population and group level effects

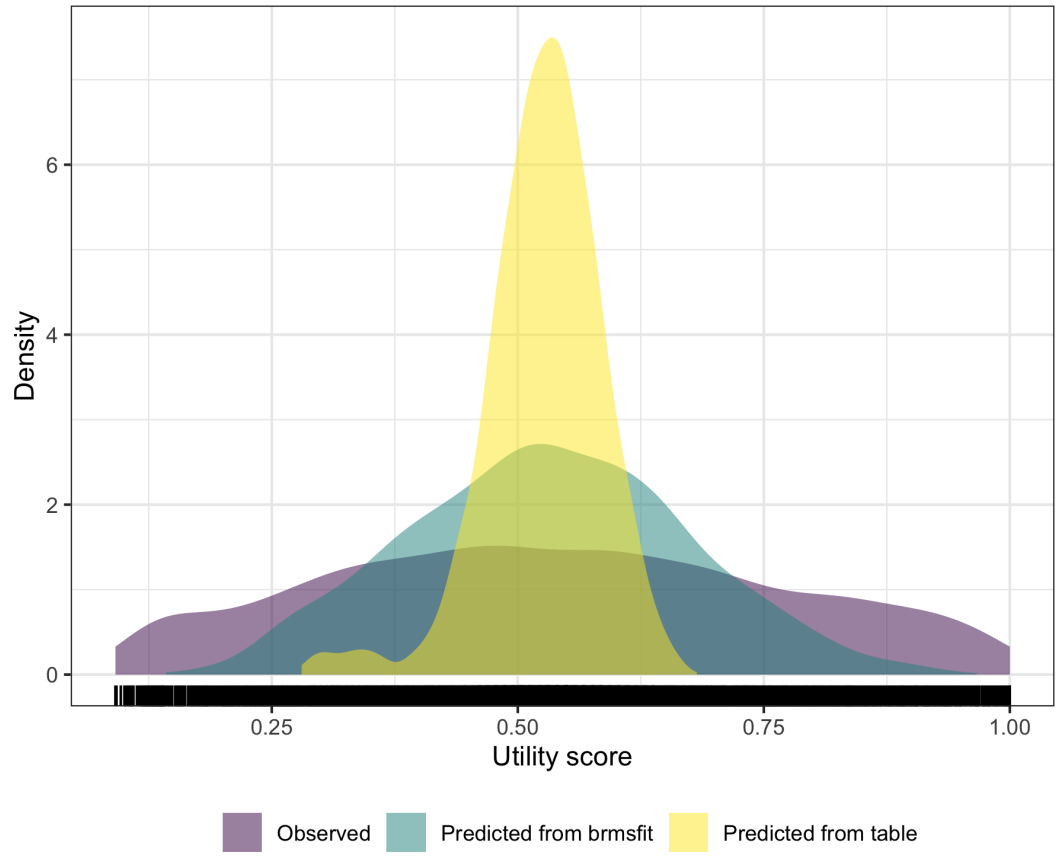


Figure 261: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

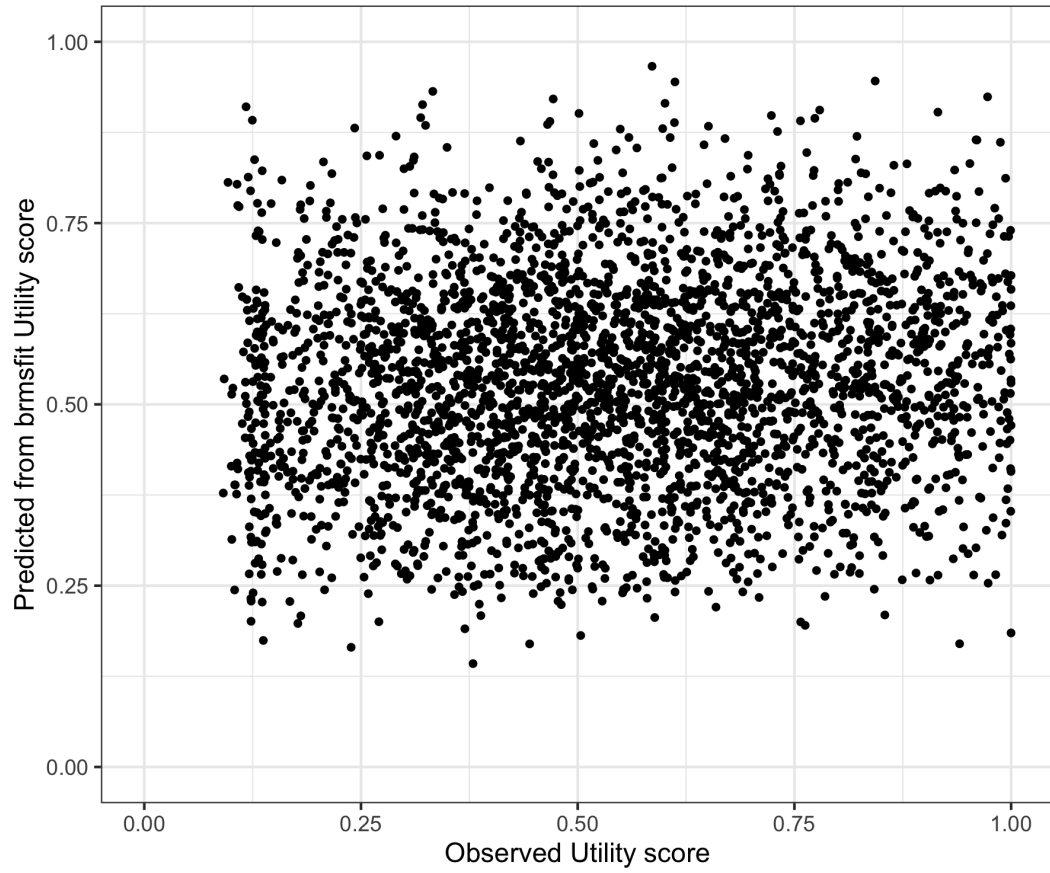


Figure 262: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

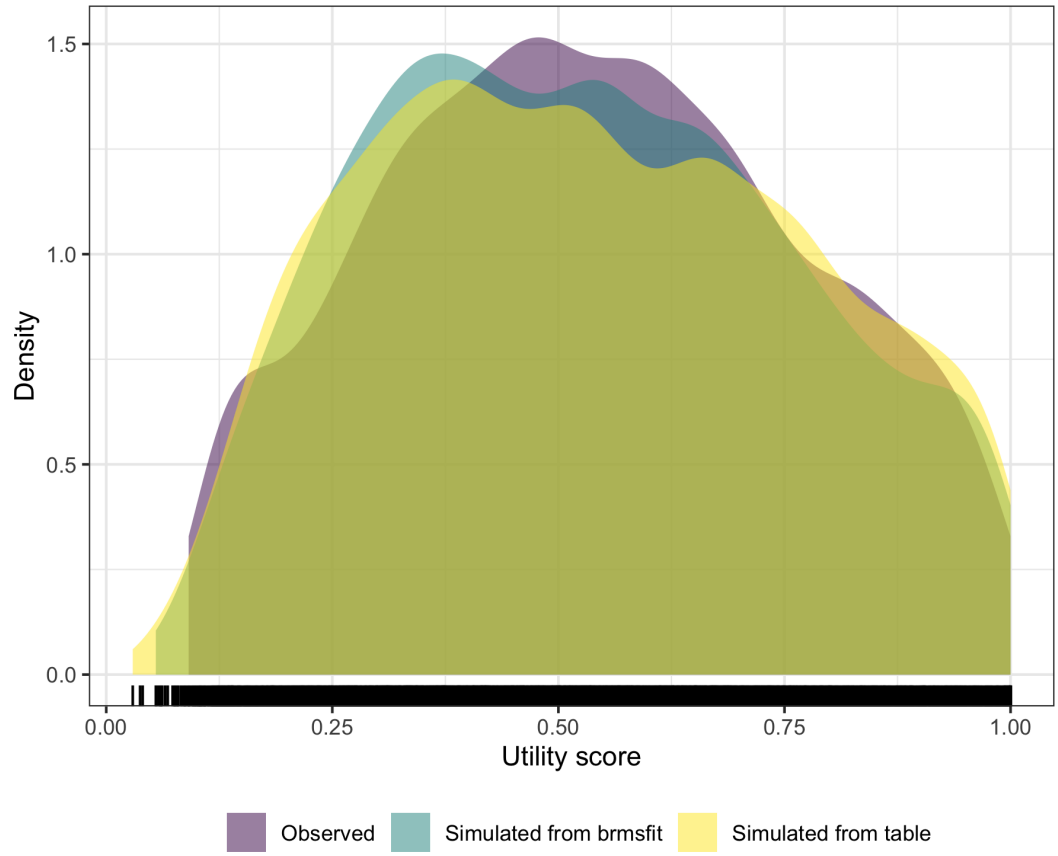


Figure 263: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

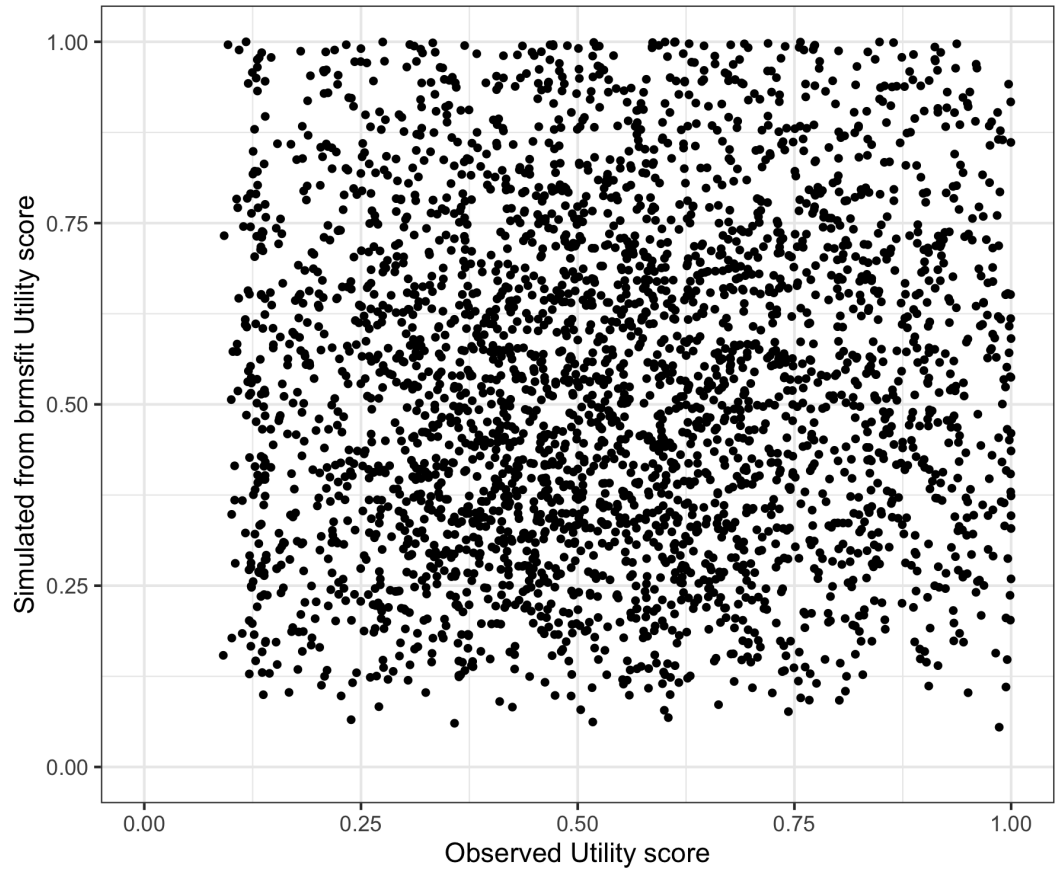


Figure 264: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

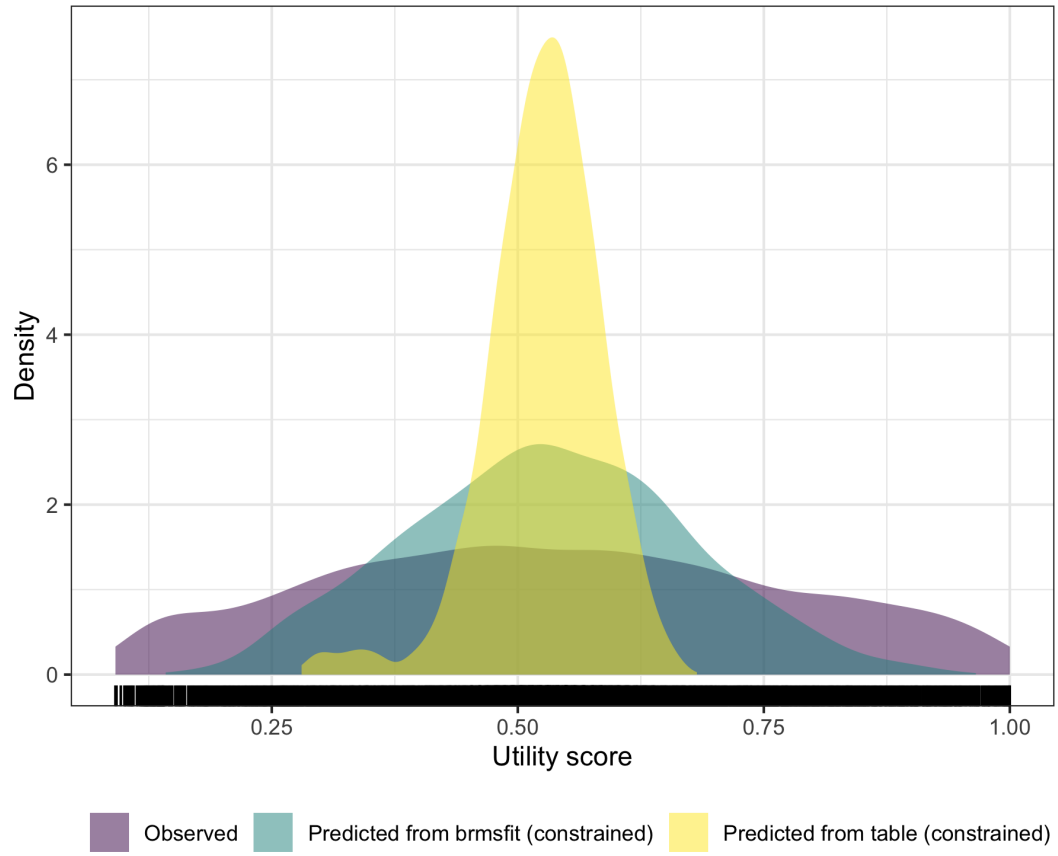


Figure 265: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

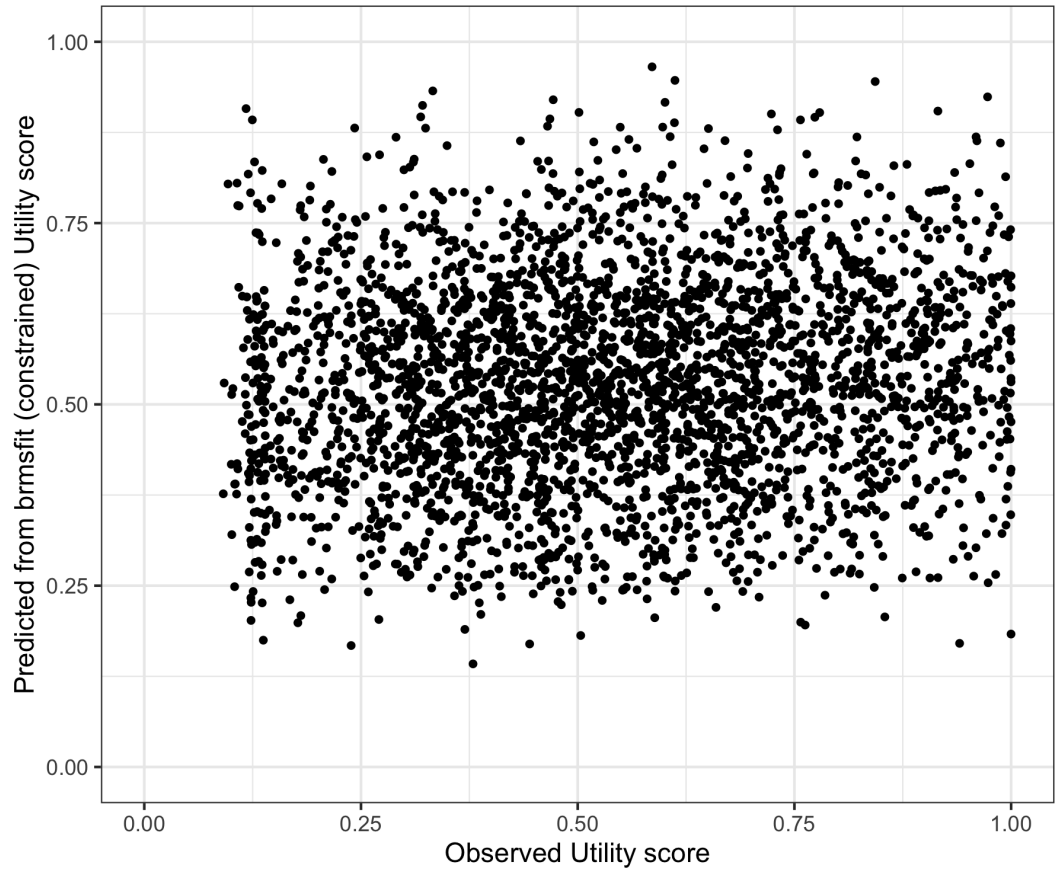


Figure 266: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

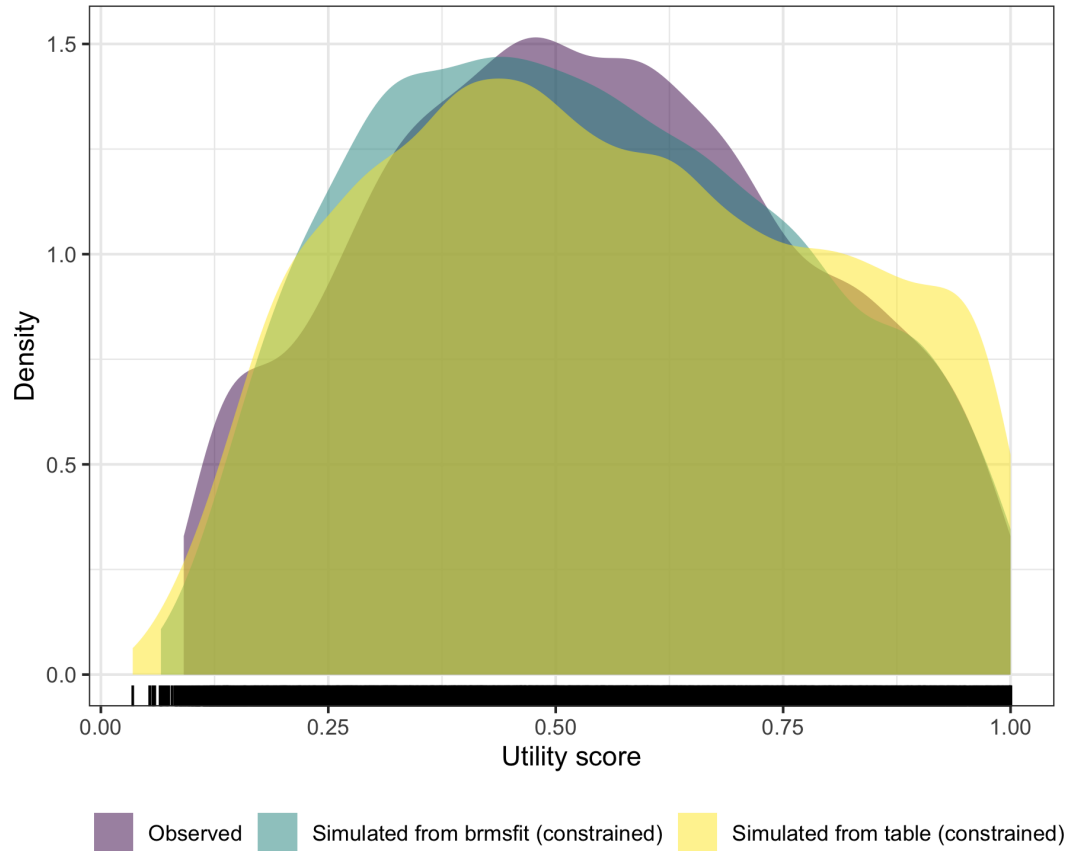


Figure 267: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

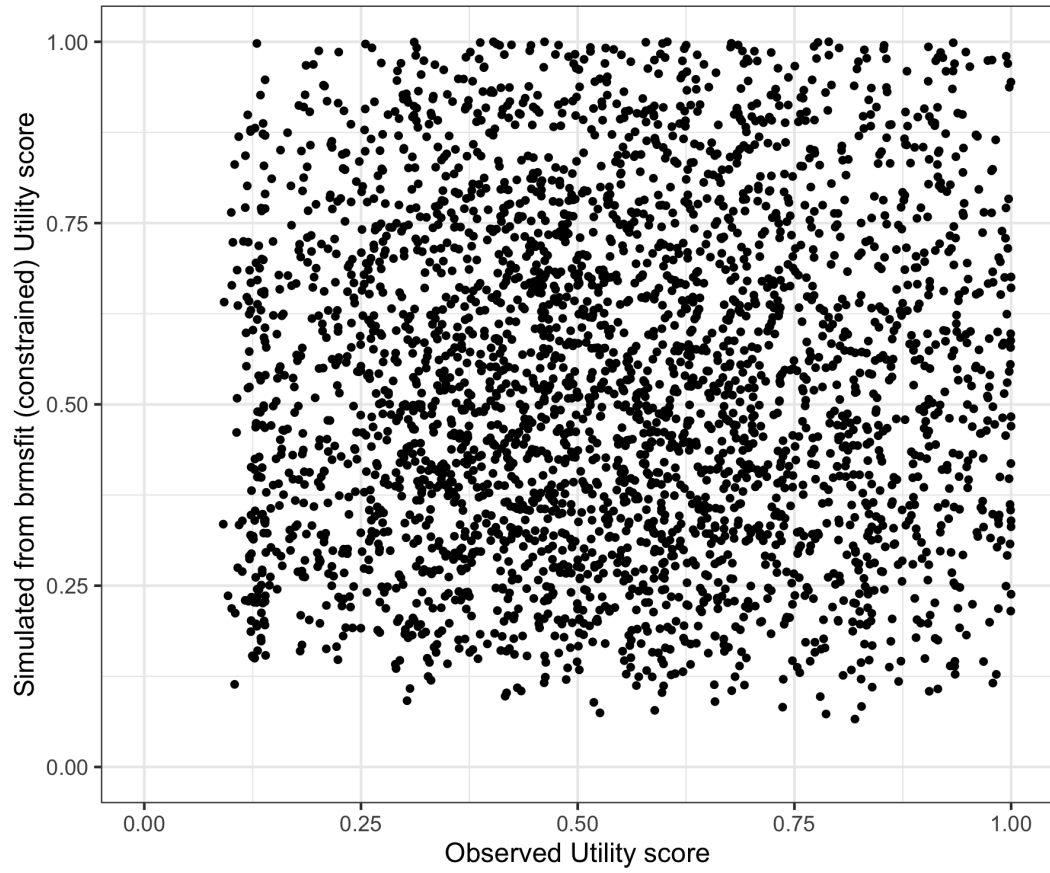


Figure 268: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

29 SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is SOFAS_dgender_1_GLM_GSN_LOG.

Table 57: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3298)							
sd(Intercept)	0.07	0.04	0.00	0.16	1.02	167	324
Population-Level Effects:							
Intercept	-1.08	0.04	-1.15	-1.00	1.00	10 912	6 203
SOFAS_scaled	0.63	0.06	0.52	0.75	1.00	9 299	6 245
dgenderMale	0.11	0.01	0.08	0.14	1.00	11 334	6 323
dgenderOther	-0.12	0.06	-0.24	-0.00	1.00	11 601	6 136
Family Specific Parameters:							
sigma	0.22	0.01	0.20	0.23	1.02	214	403

Formula: AQOL6D ~SOFAS_scaled + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 58: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.10	0.04	0.055 , 0.208
RMSE	0.31	0.01	0.303 , 0.314

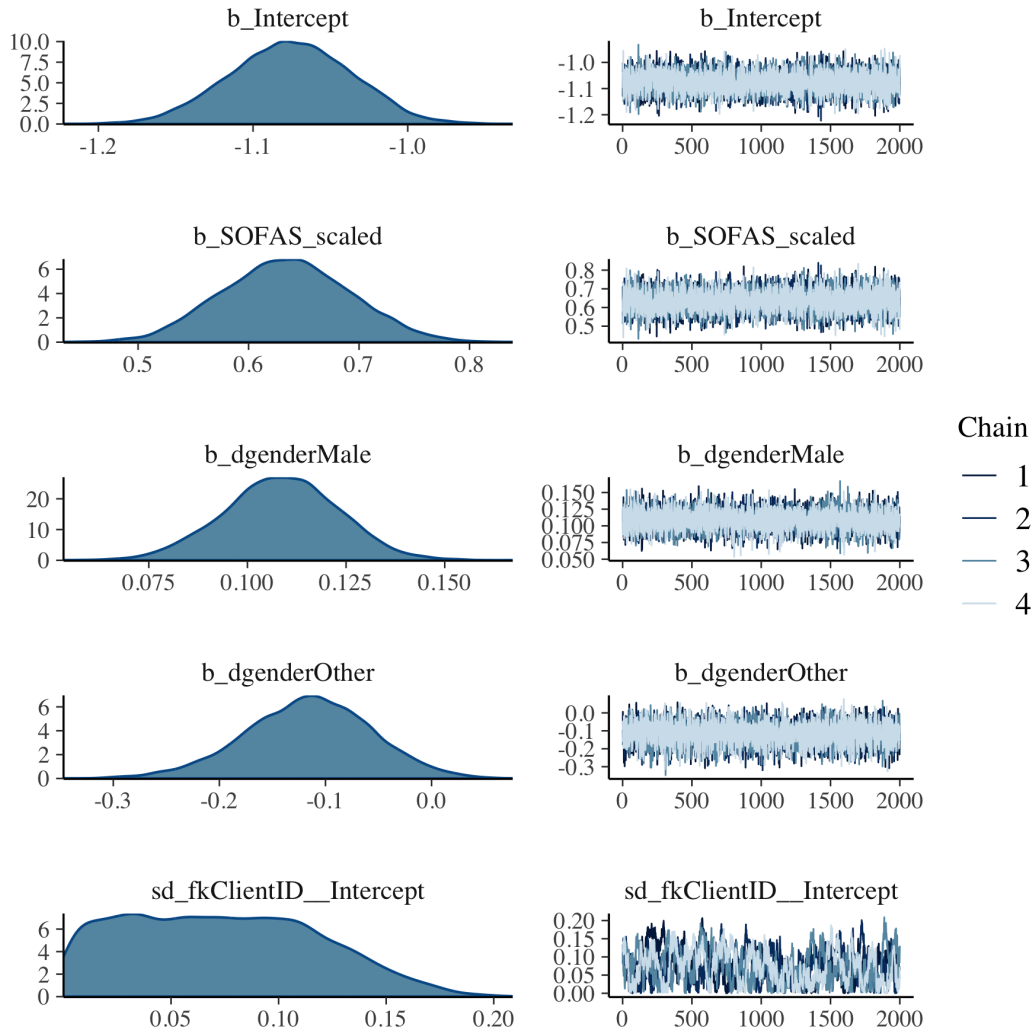


Figure 269: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link population level effects

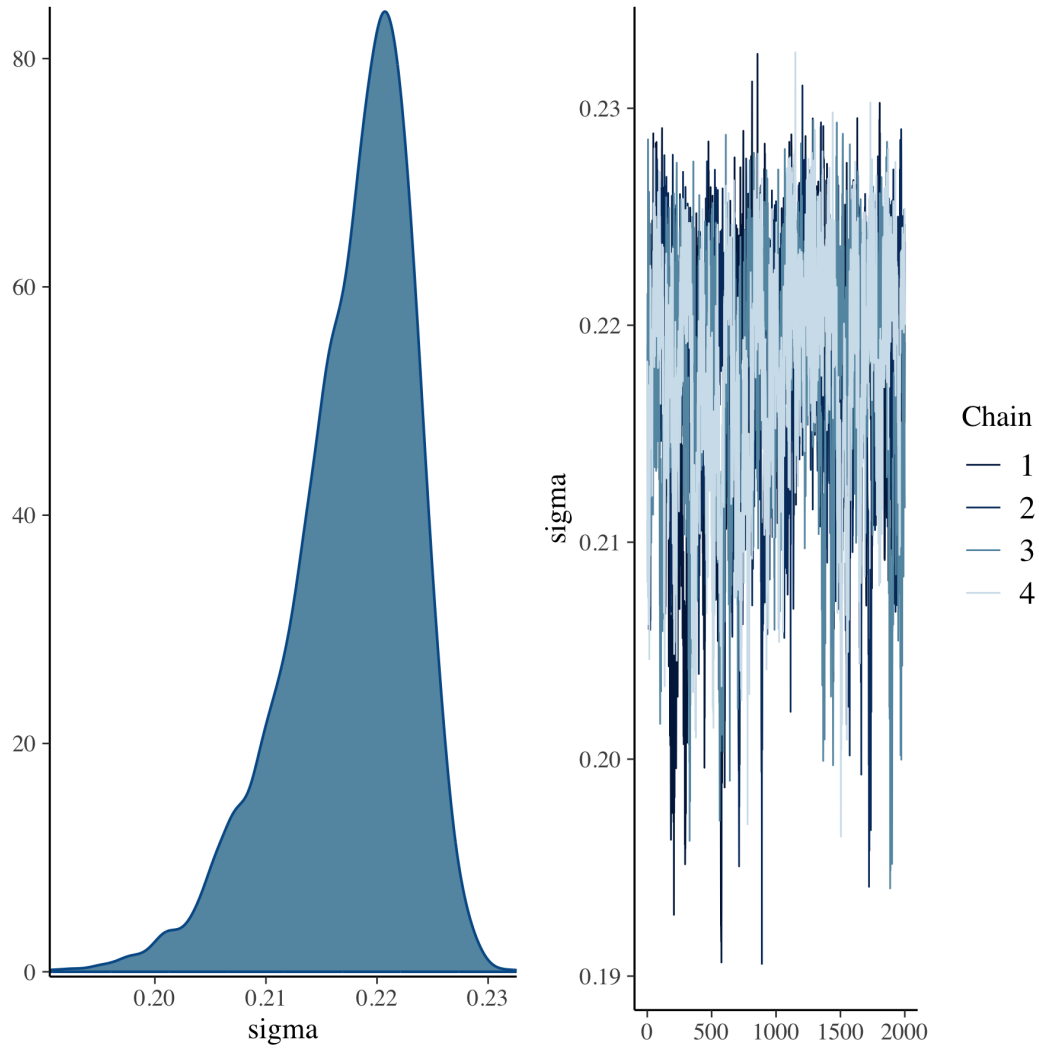


Figure 270: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link group level effects

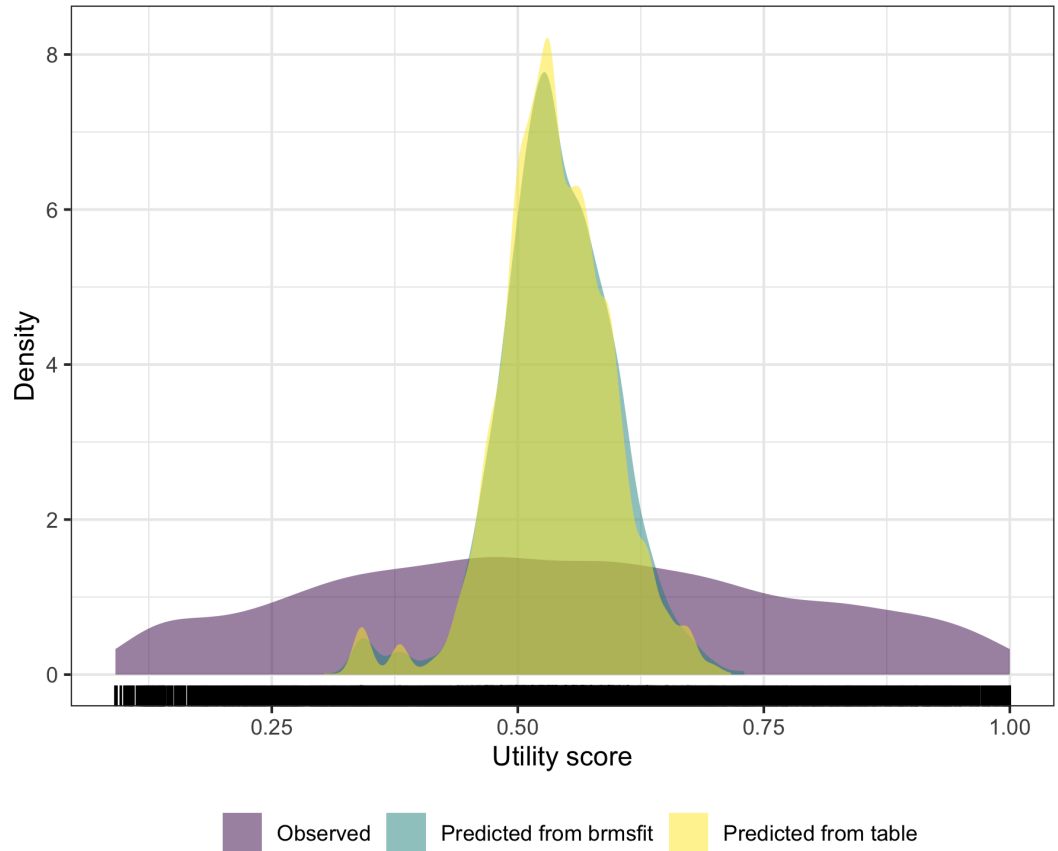


Figure 271: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

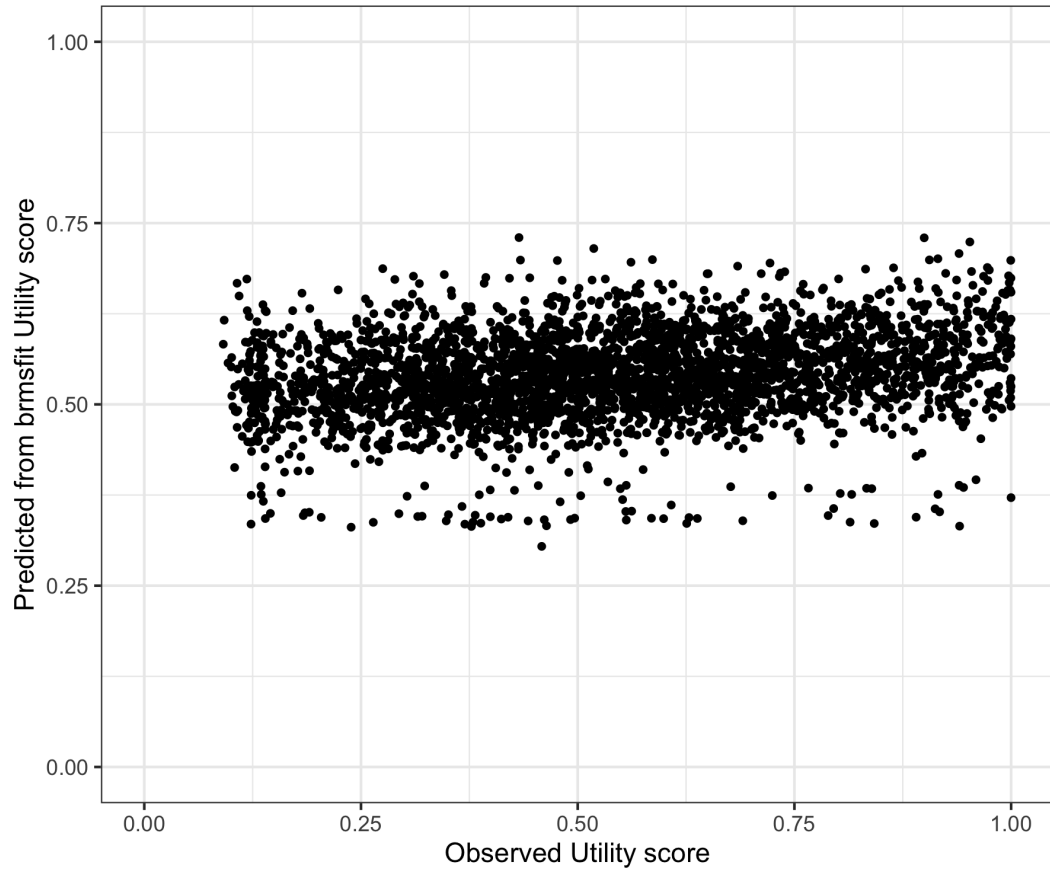


Figure 272: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

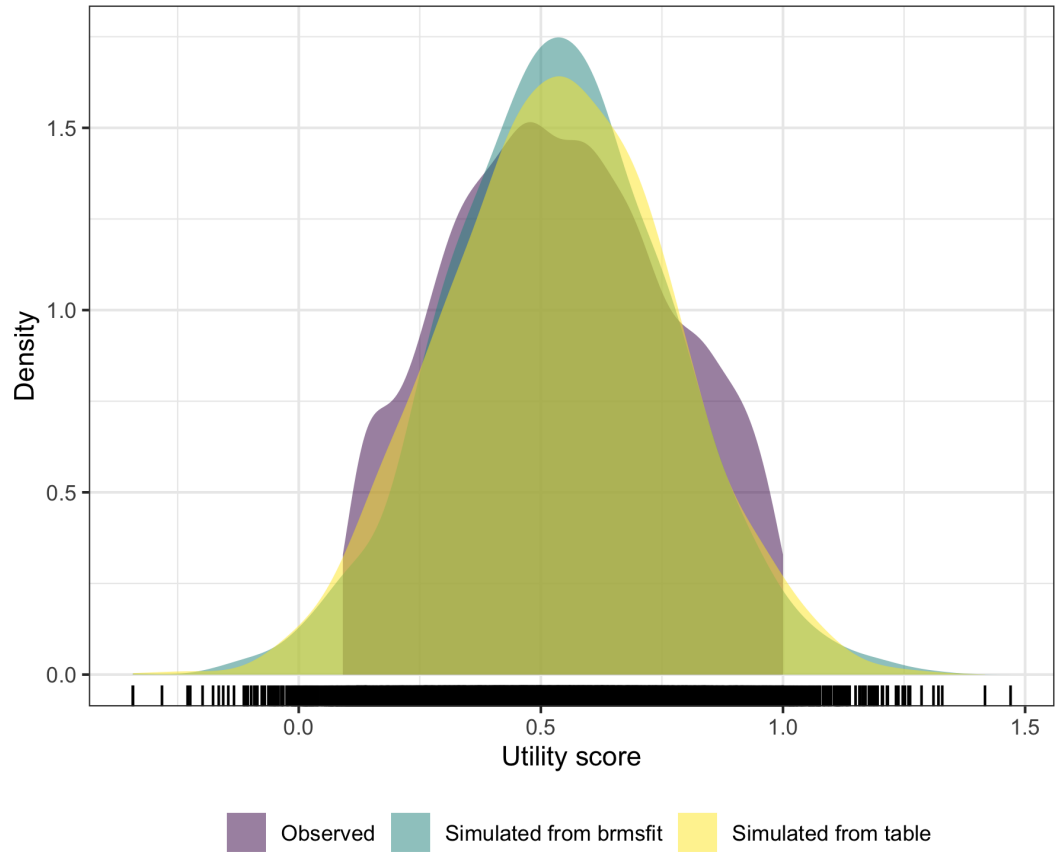


Figure 273: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

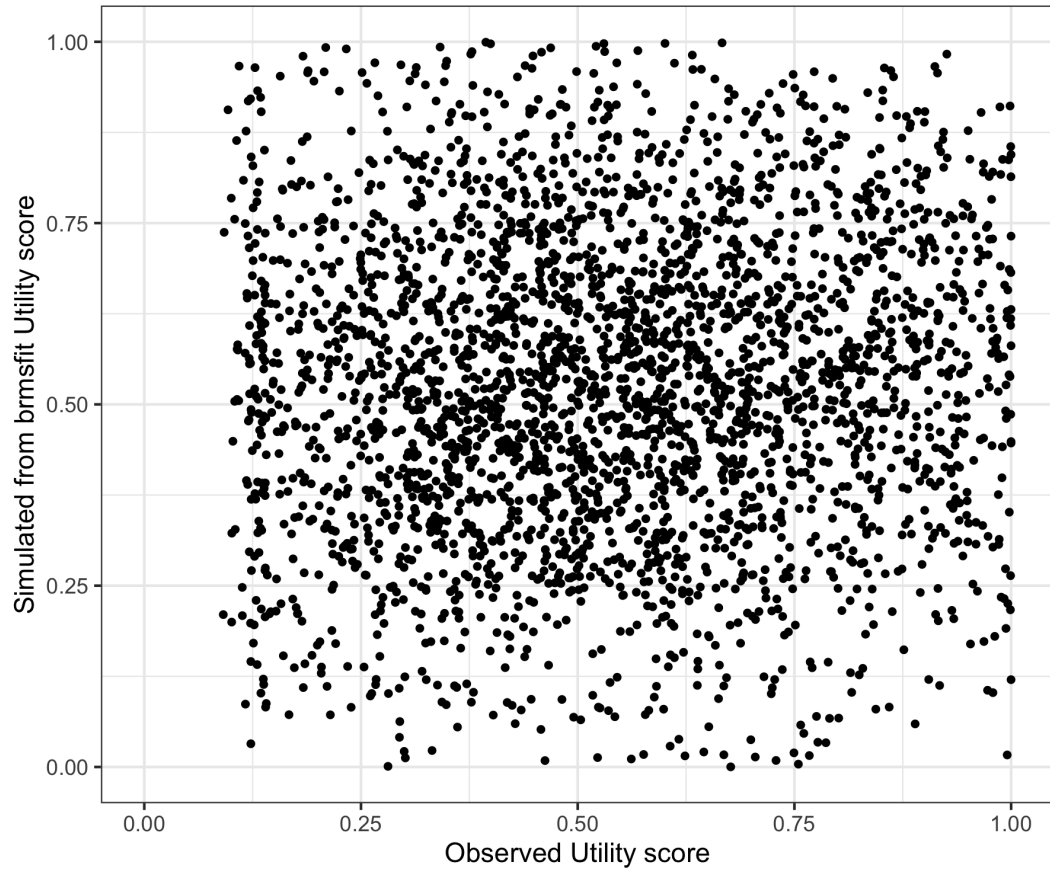


Figure 274: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

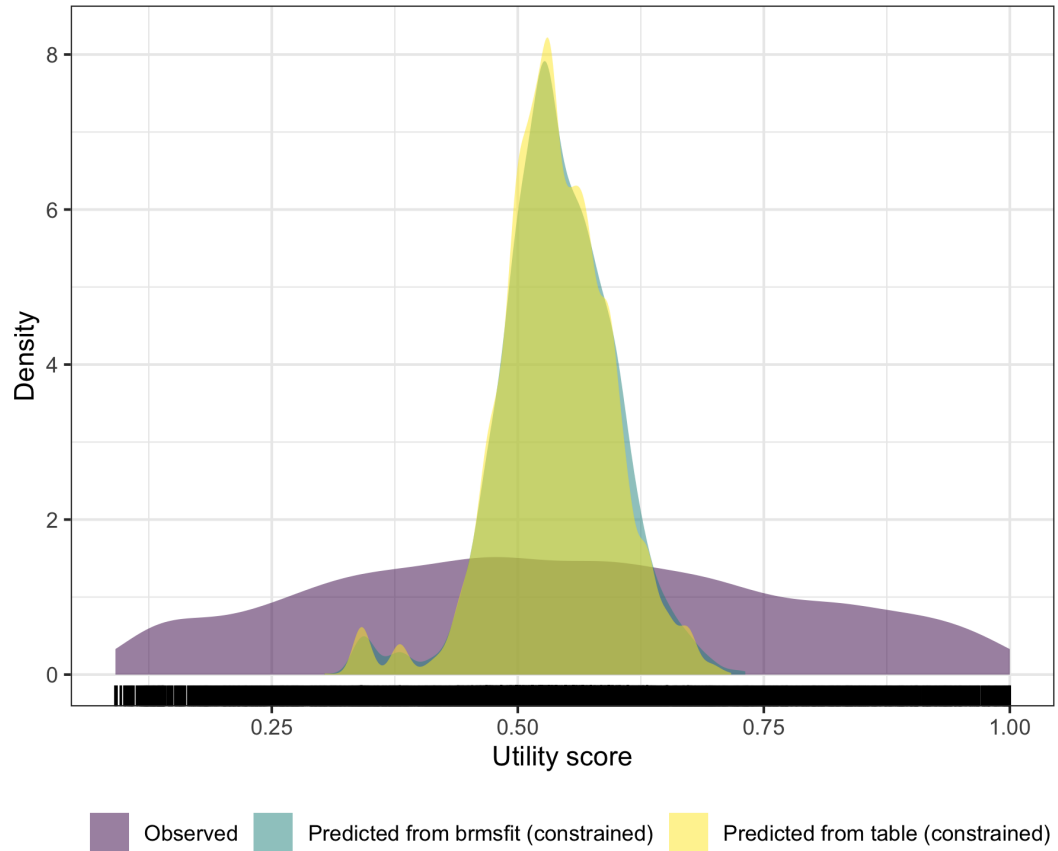


Figure 275: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

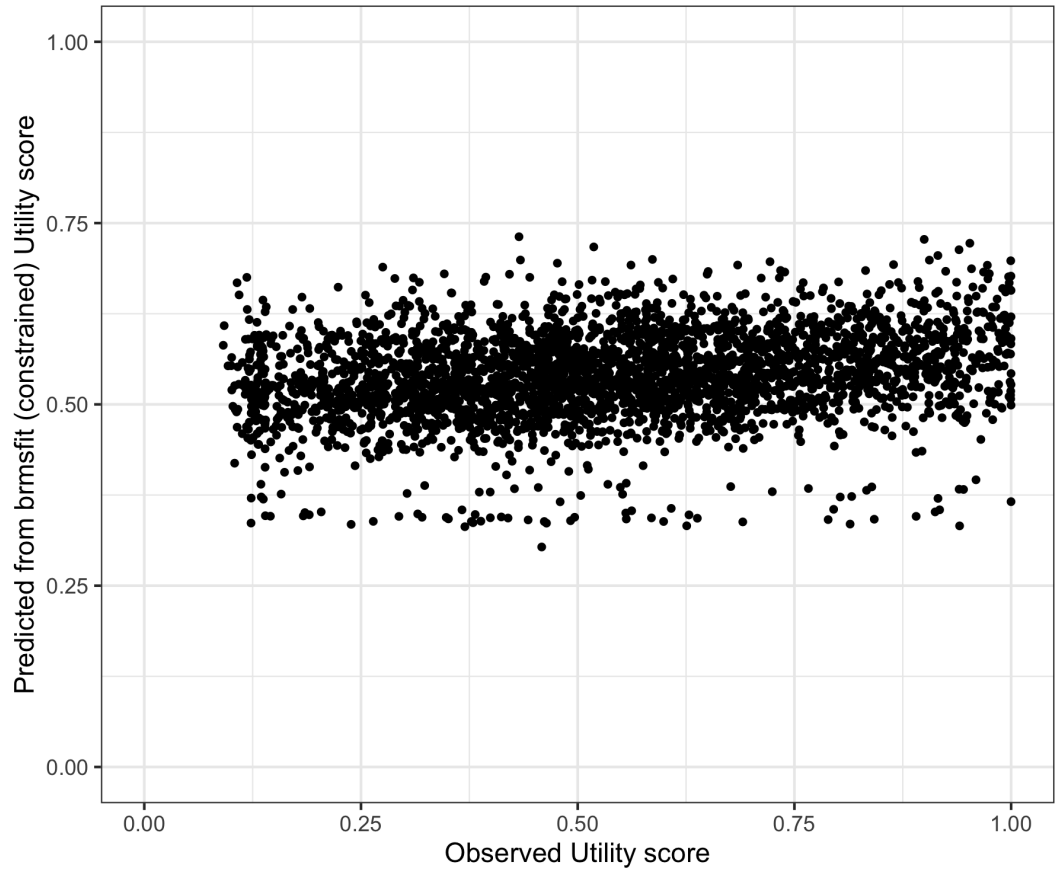


Figure 276: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

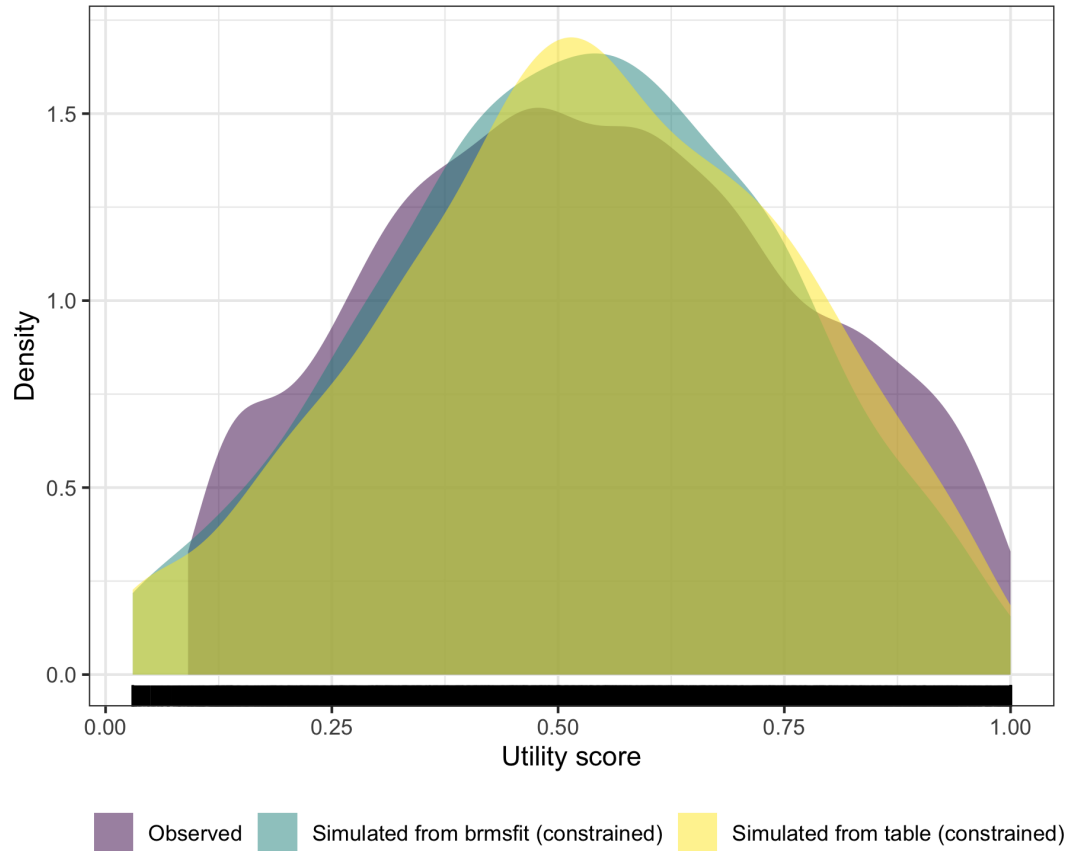


Figure 277: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

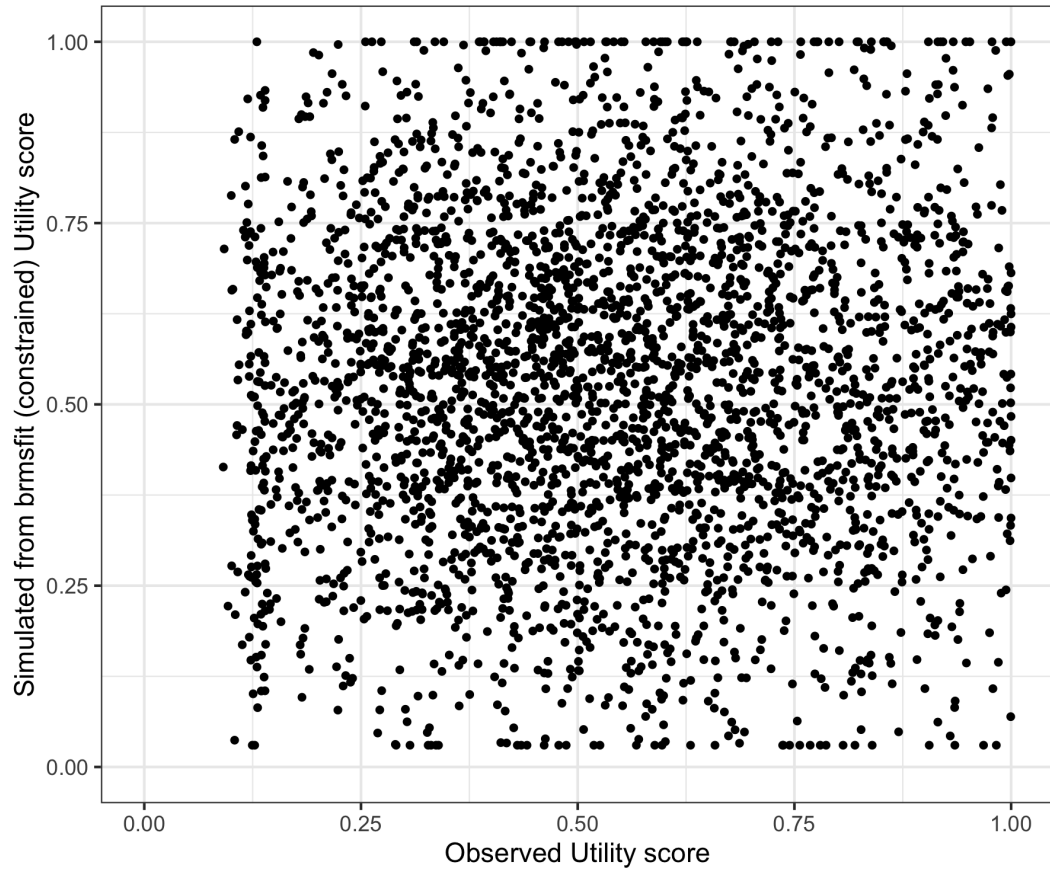


Figure 278: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

30 SOFAS with dgender linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is SOFAS_dgender_1_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 33 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>.

Table 59: SOFAS with dgender linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3298)							
sd(Intercept)	0.33	0.20	0.01	0.67	1.32	11	47
Population-Level Effects:							
Intercept	-1.00	0.06	-1.12	-0.88	1.00	6 569	5 320
SOFAS_scaled	0.97	0.09	0.79	1.15	1.00	6 915	5 420
dgenderMale	0.21	0.03	0.16	0.26	1.00	6 566	5 568
dgenderOther	-0.20	0.09	-0.39	-0.02	1.00	5 898	4 370
Family Specific Parameters:							
sigma	0.66	0.12	0.38	0.78	1.31	11	47

Formula: AQOL6D_CLL ~SOFAS_scaled + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 60: SOFAS with dgender linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.29	0.23	0.05 , 0.768
RMSE	1.13	0.04	1.099 , 1.156

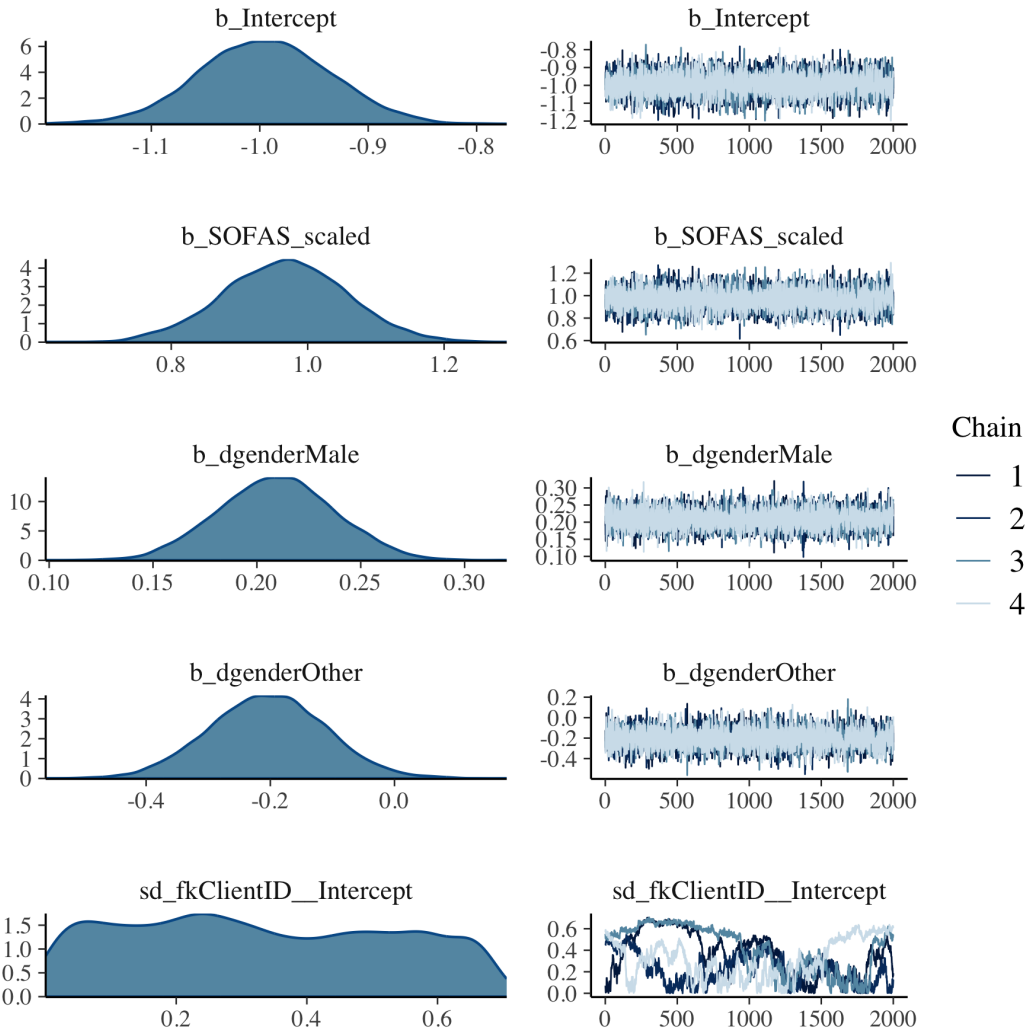


Figure 279: SOFAS with dgender linear mixed model with complementary log log transformation population level effects

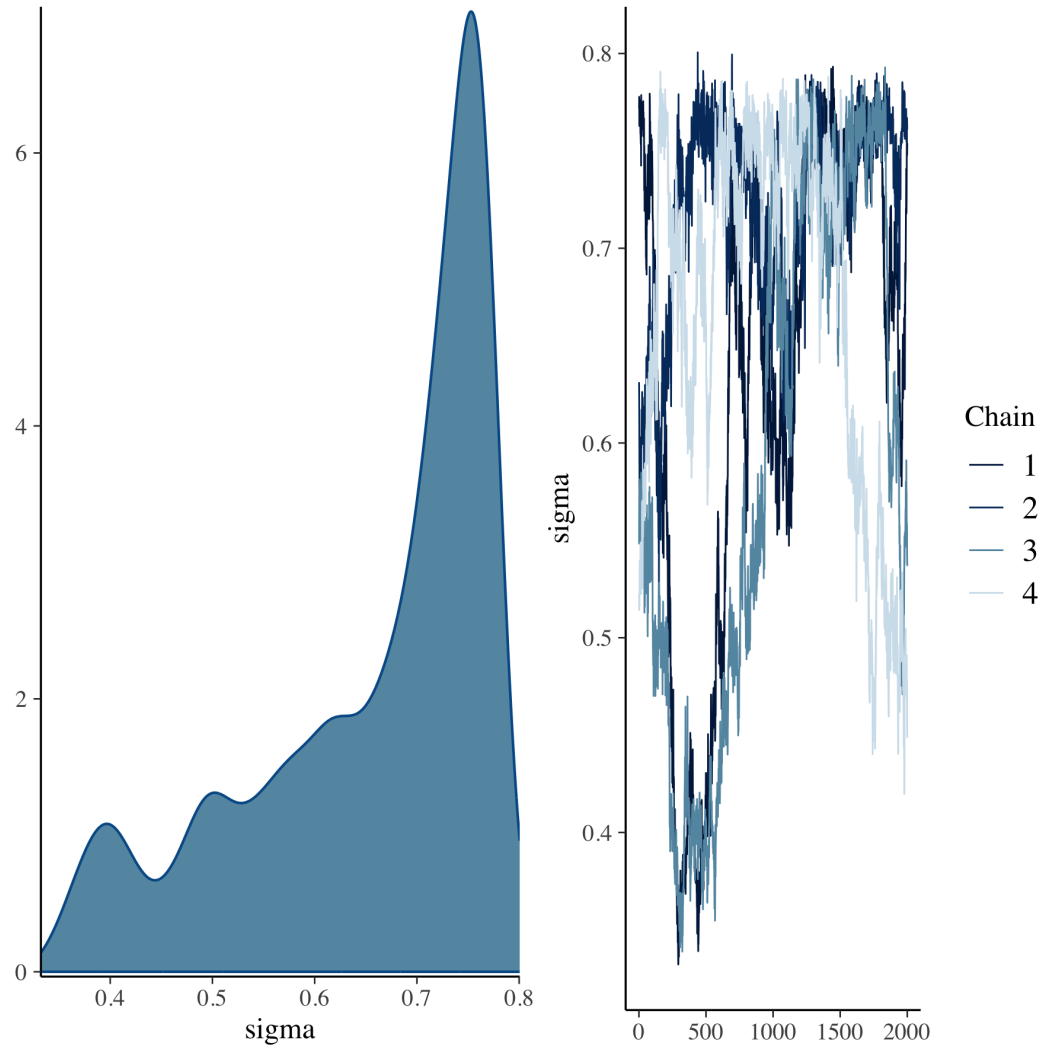


Figure 280: SOFAS with dggender linear mixed model with complementary log log transformation group level effects

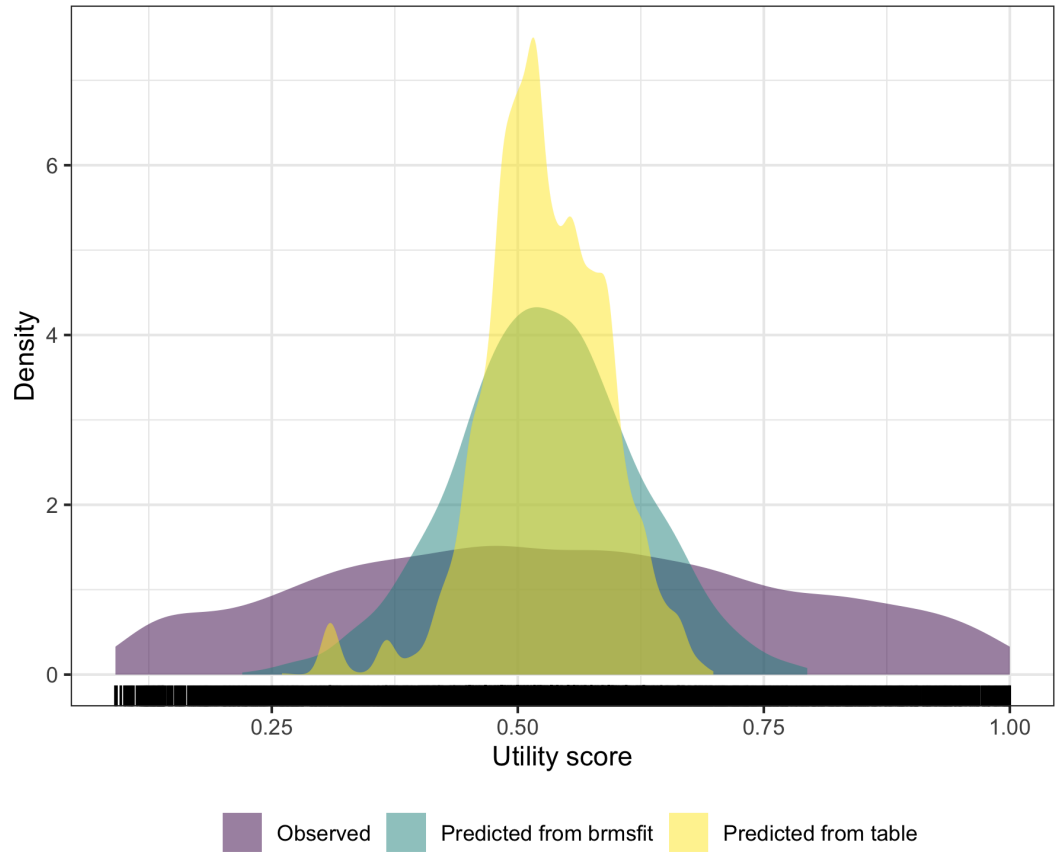


Figure 281: SOFAS with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

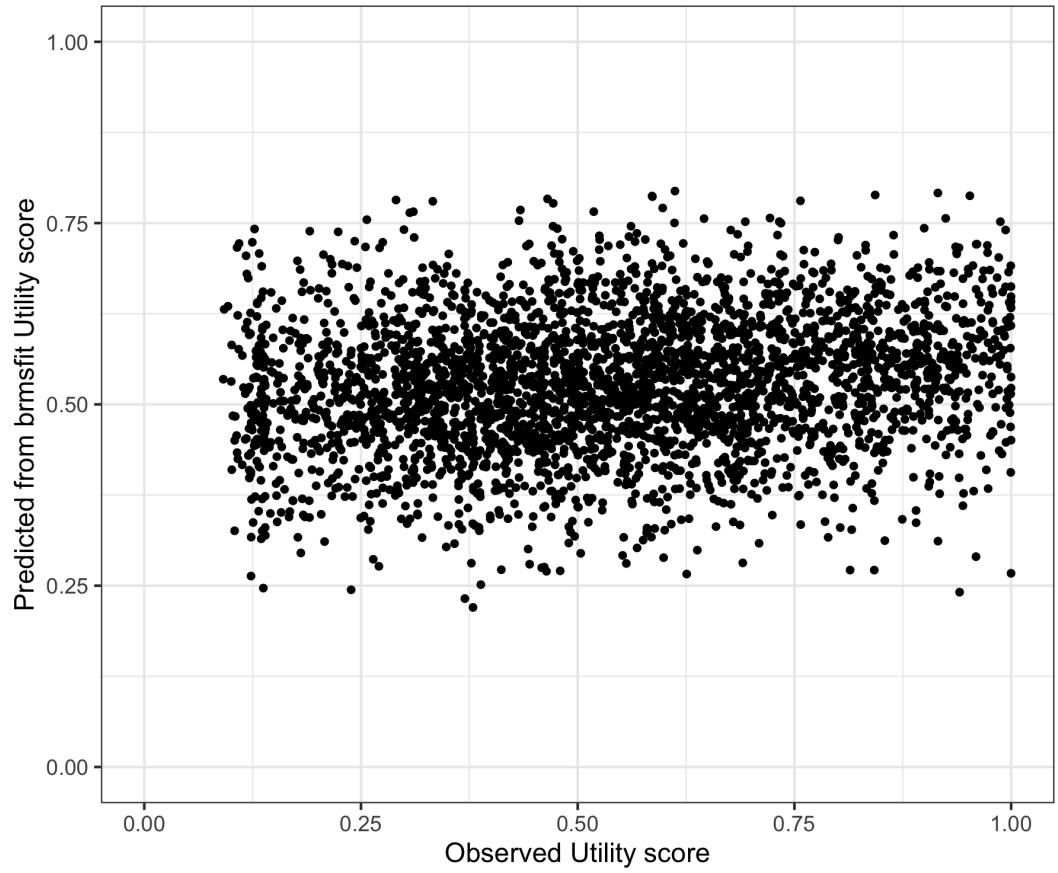


Figure 282: SOFAS with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

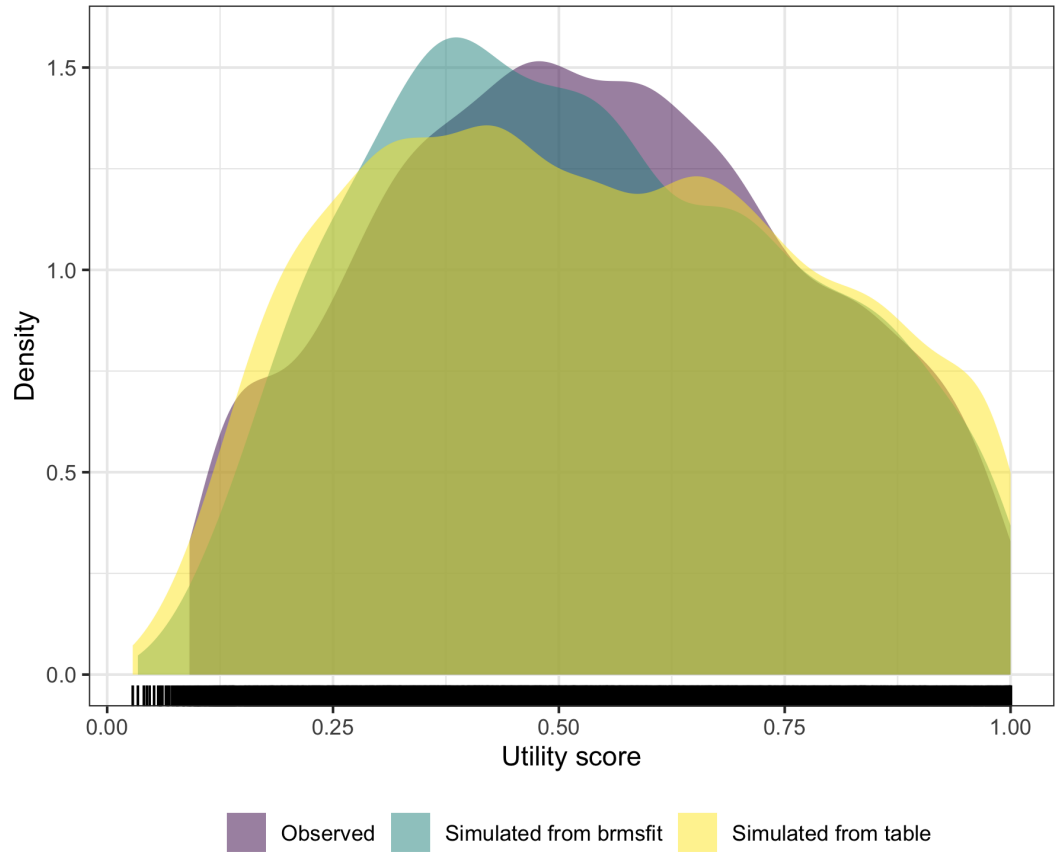


Figure 283: SOFAS with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

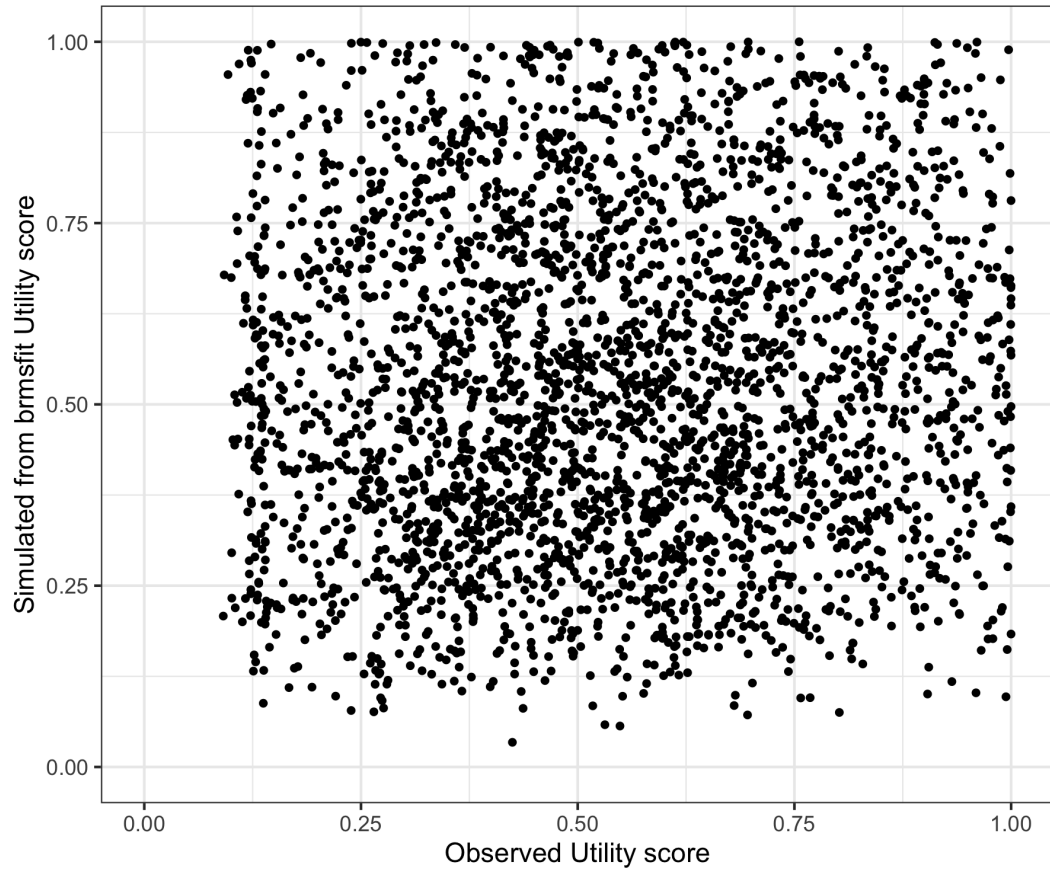


Figure 284: SOFAS with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

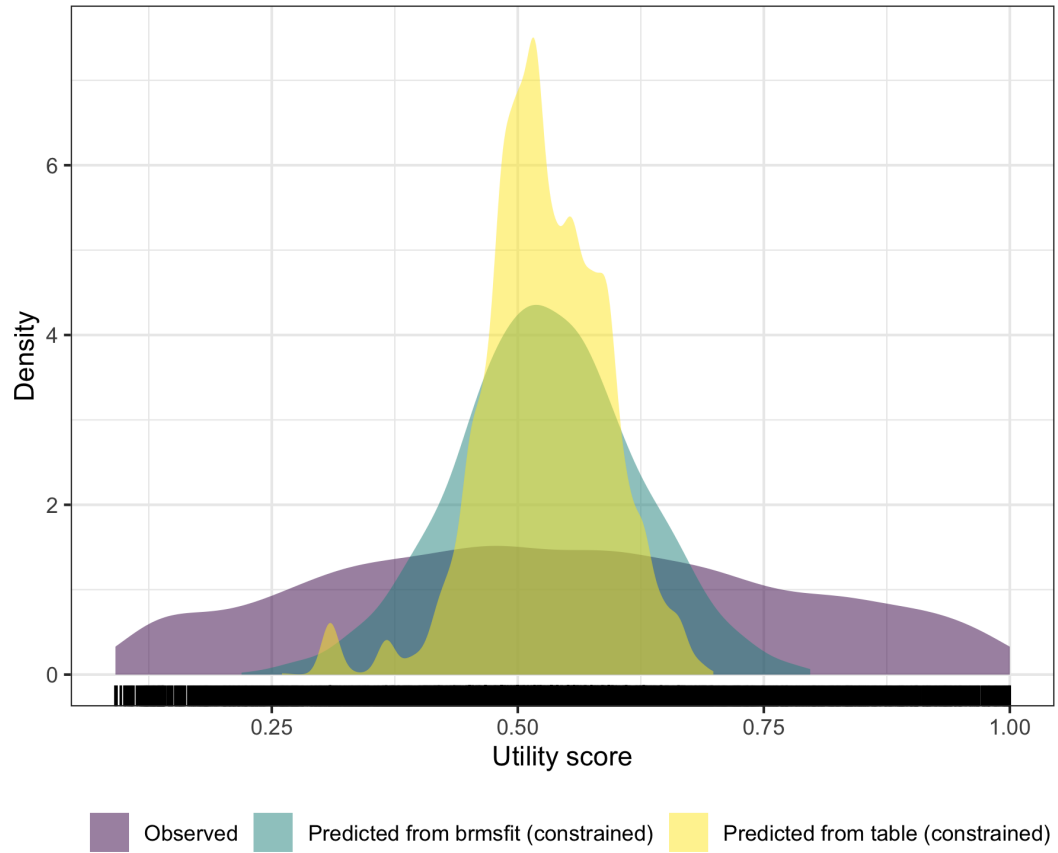


Figure 285: SOFAS with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

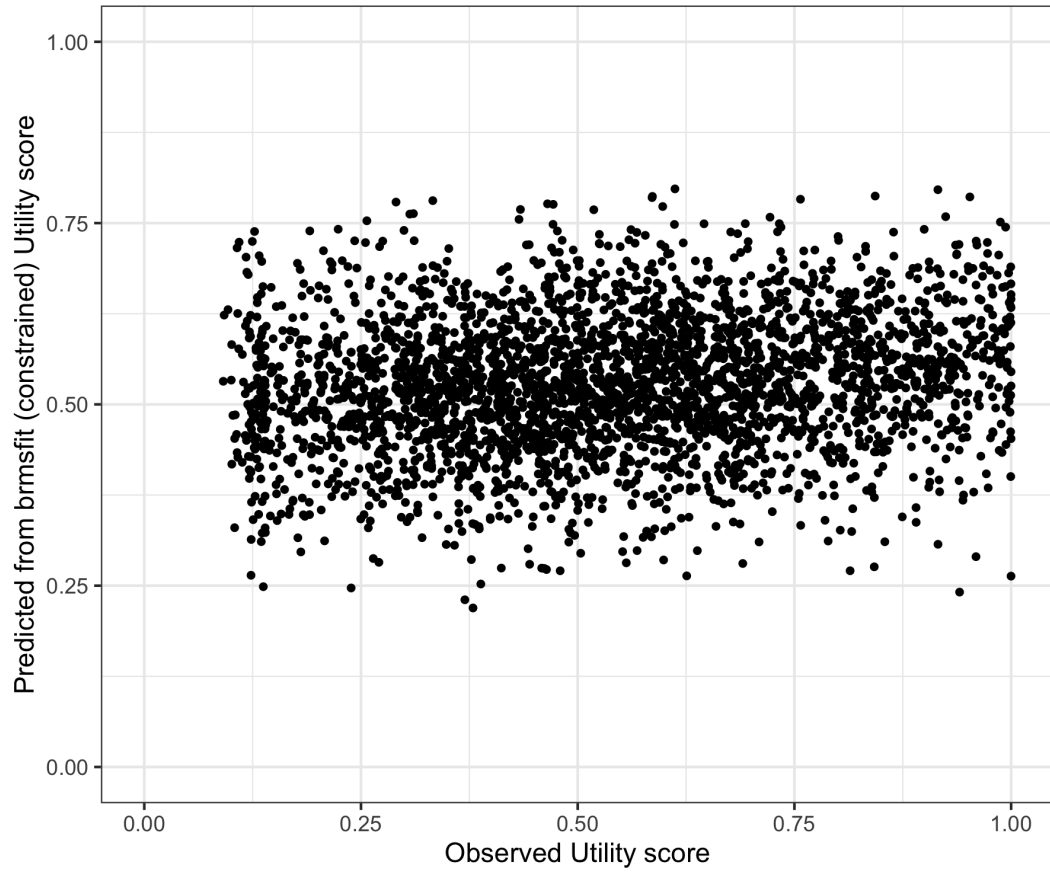


Figure 286: SOFAS with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

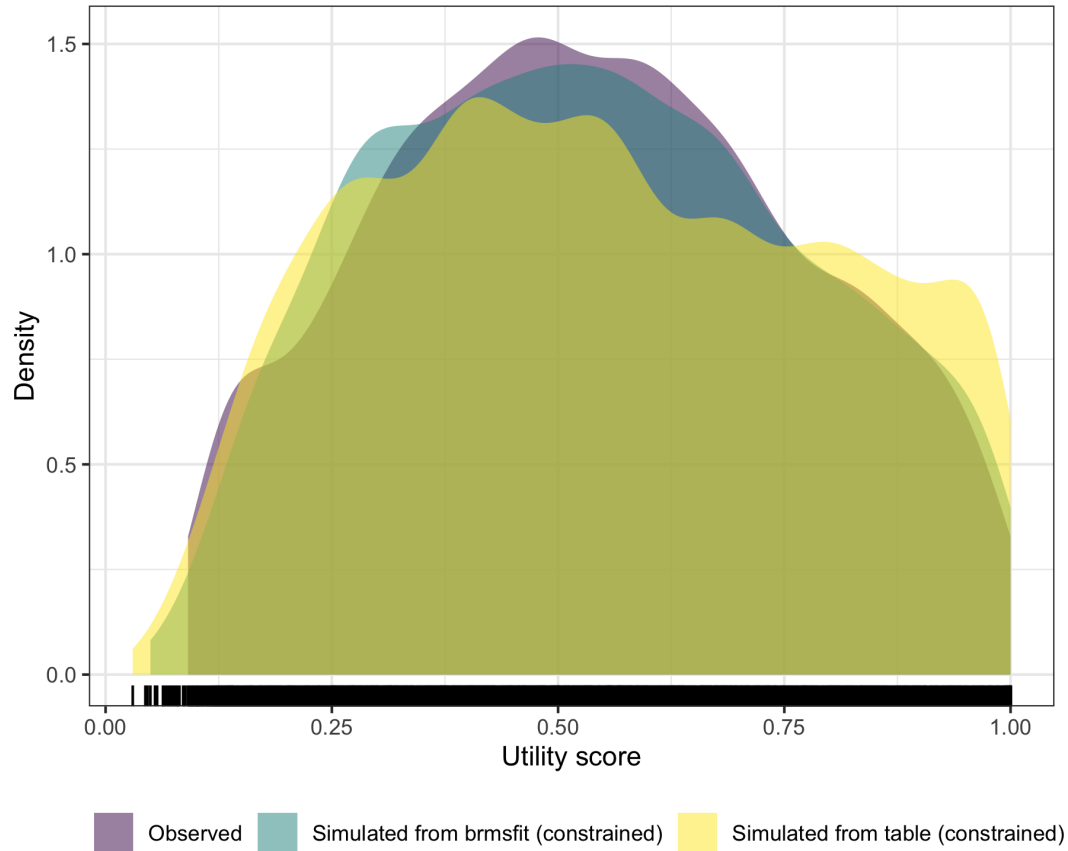


Figure 287: SOFAS with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

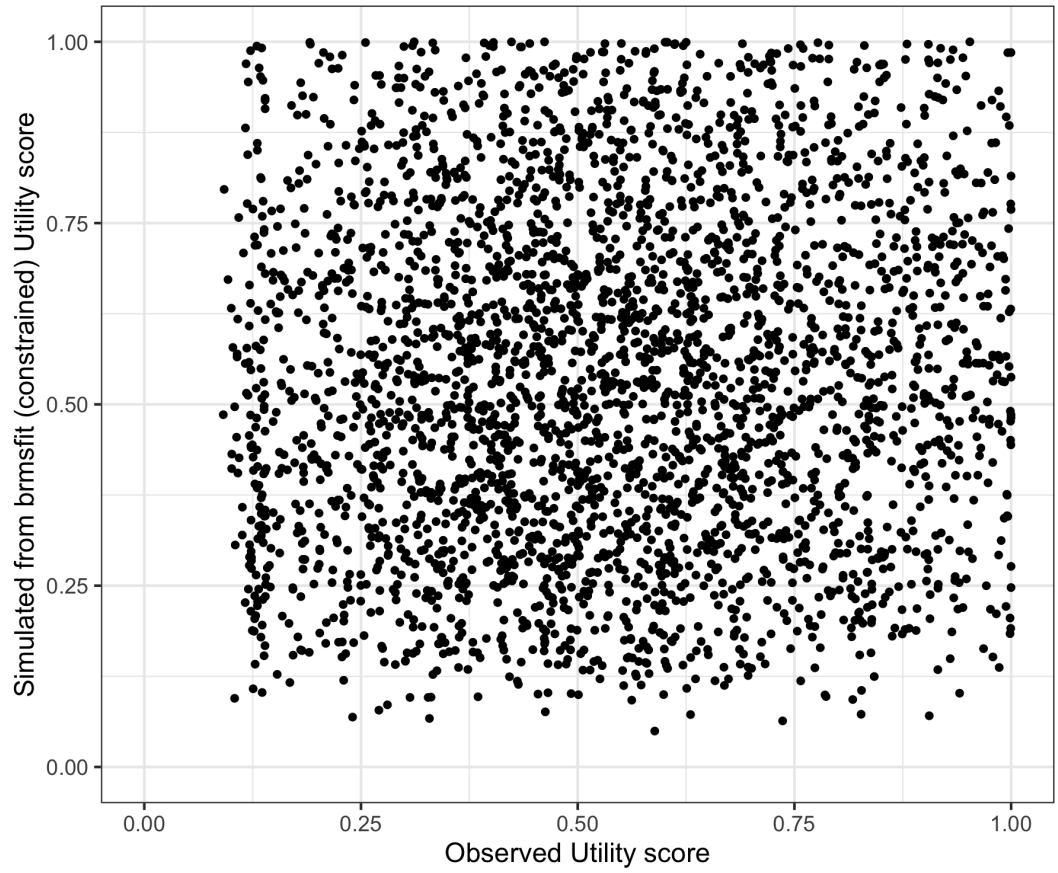


Figure 288: SOFAS with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

31 SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in -SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); -dstudyingworkingBoth (); -dstudyingworkingStudy (); and -dstudyingworkingWork (). The catalogue reference for this model is SOFAS_dstudyingworking_1_GLM_GSN_LOG.

Warning: There were 1 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>

Table 61: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3216)							
sd(Intercept)	0.06	0.04	0.00	0.15	1.01	201	506
Population-Level Effects:							
Intercept	-1.08	0.04	-1.17	-1.00	1.00	10 942	6 342
SOFAS_scaled	0.64	0.06	0.53	0.76	1.00	10 338	5 856
dstudyingworkingBoth	0.06	0.02	0.02	0.10	1.00	7 053	5 716
dstudyingworkingStudy	0.07	0.02	0.03	0.11	1.00	6 584	6 036
dstudyingworkingWork	0.02	0.02	-0.03	0.06	1.00	6 970	5 660
Family Specific Parameters:							
sigma	0.22	0.00	0.21	0.23	1.00	322	590

Formula: AQOL6D ~SOFAS_scaled + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 62: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.08	0.03	0.041 , 0.168
RMSE	0.31	0.01	0.309 , 0.317

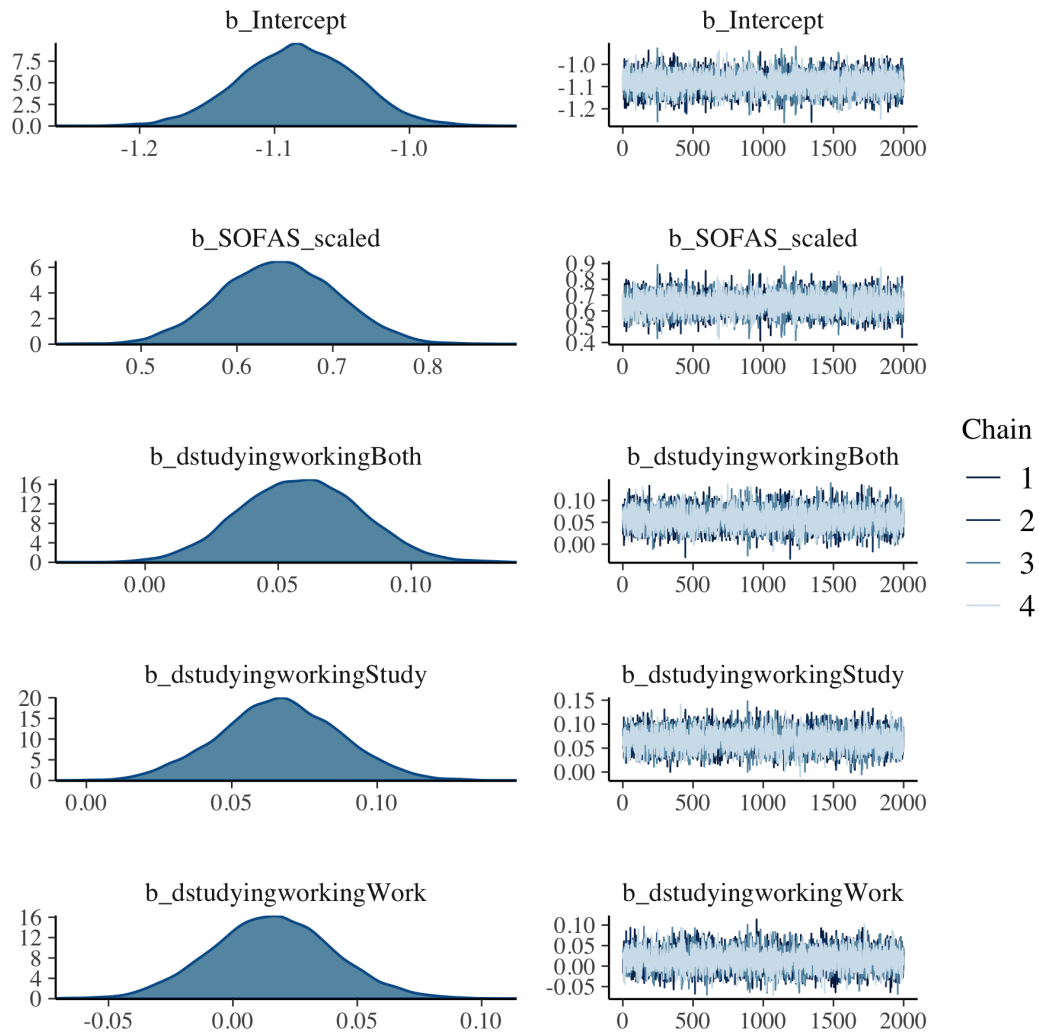


Figure 289: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link population level effects

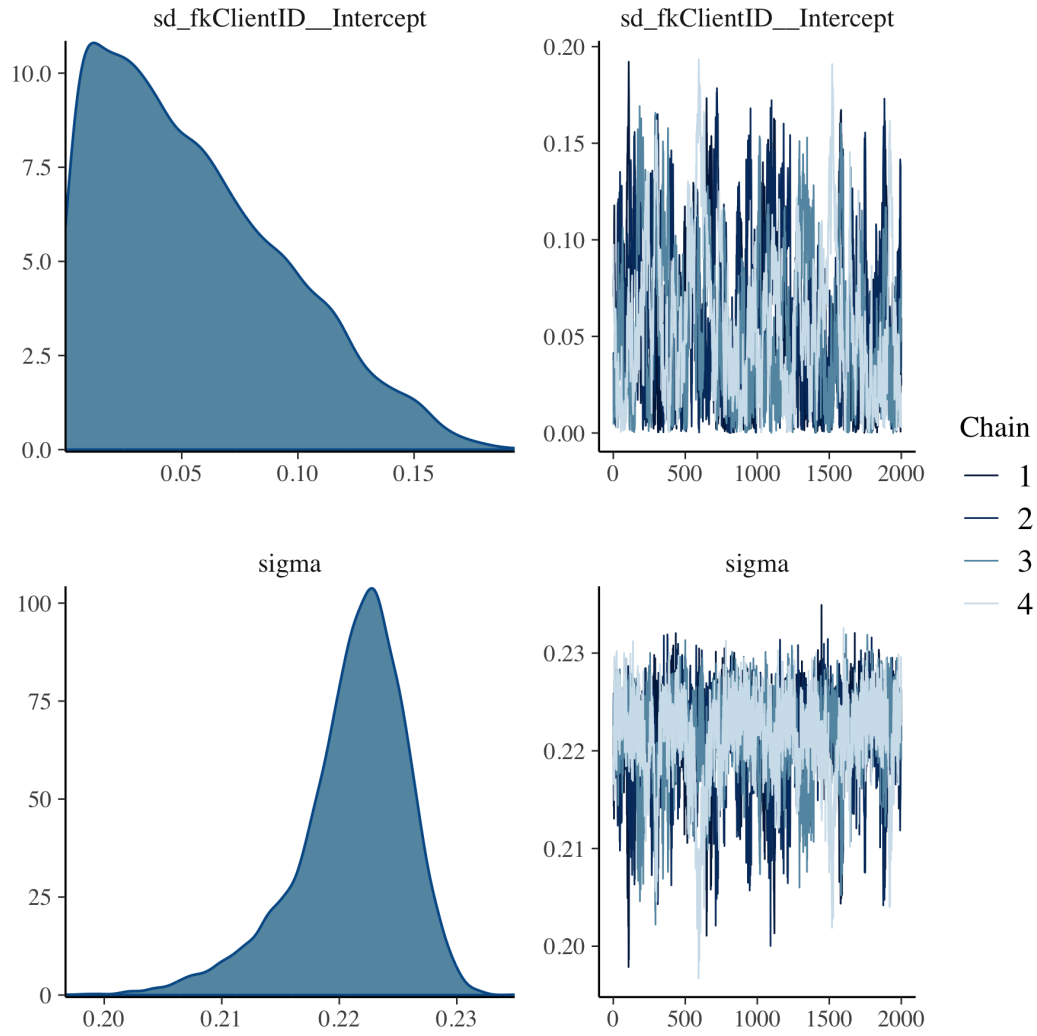


Figure 290: SOFAS with `dstudyingworking` generalised linear mixed model with Gaussian distribution and log link group level effects

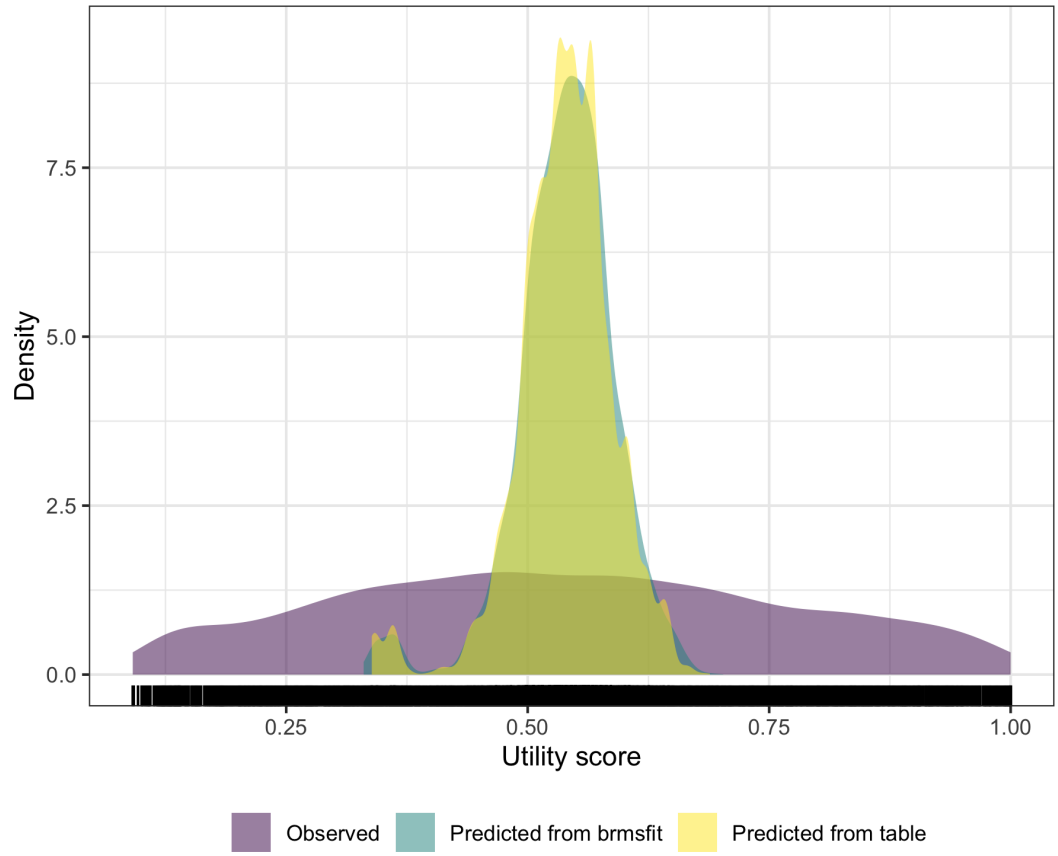


Figure 291: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

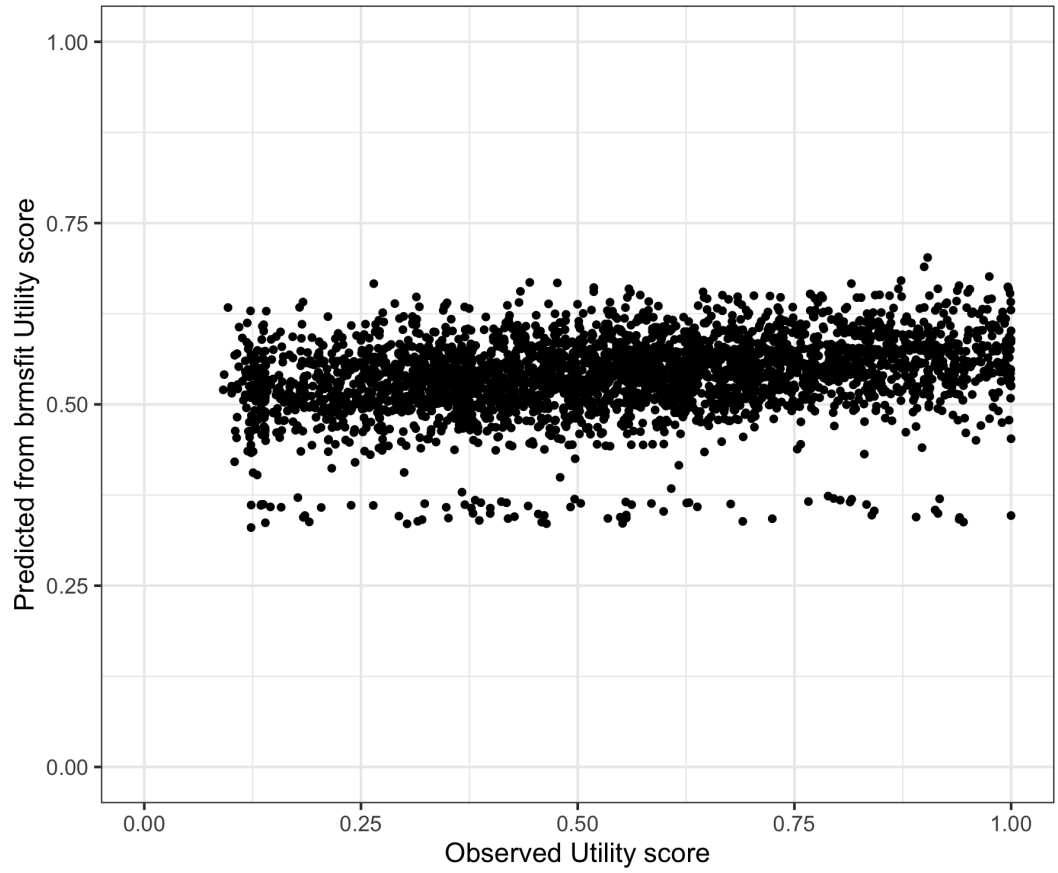


Figure 292: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

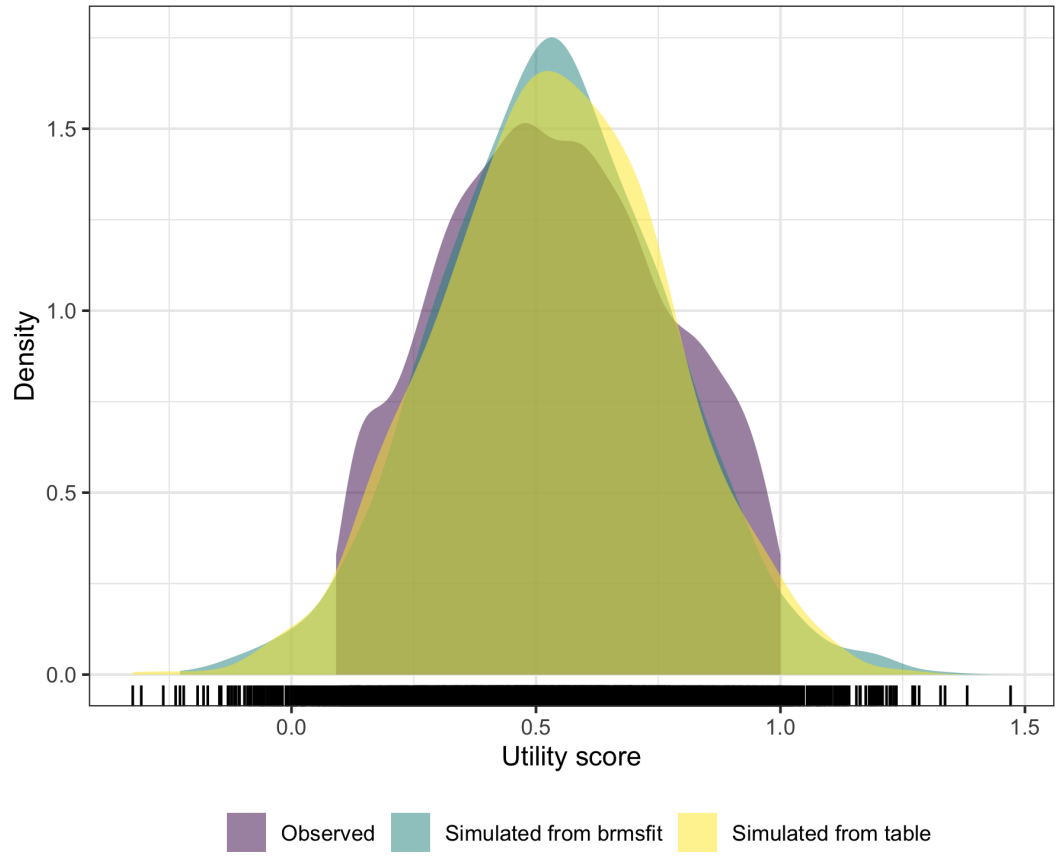


Figure 293: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

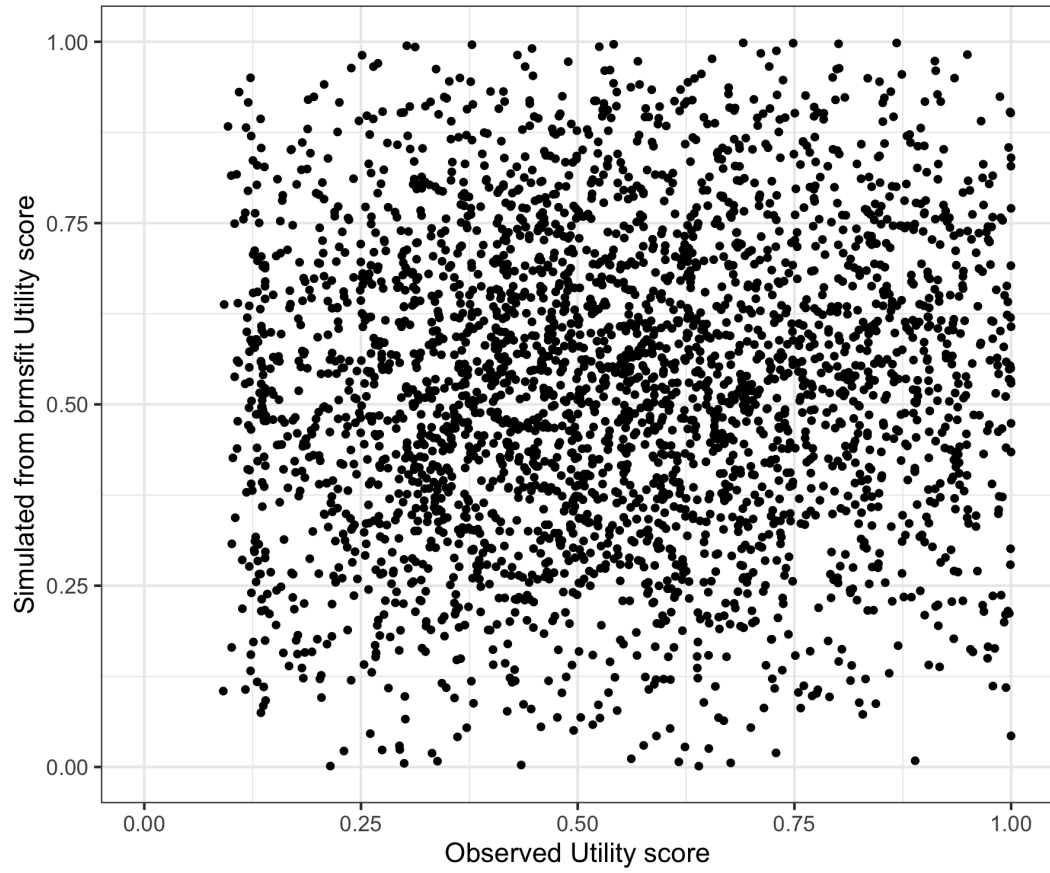


Figure 294: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

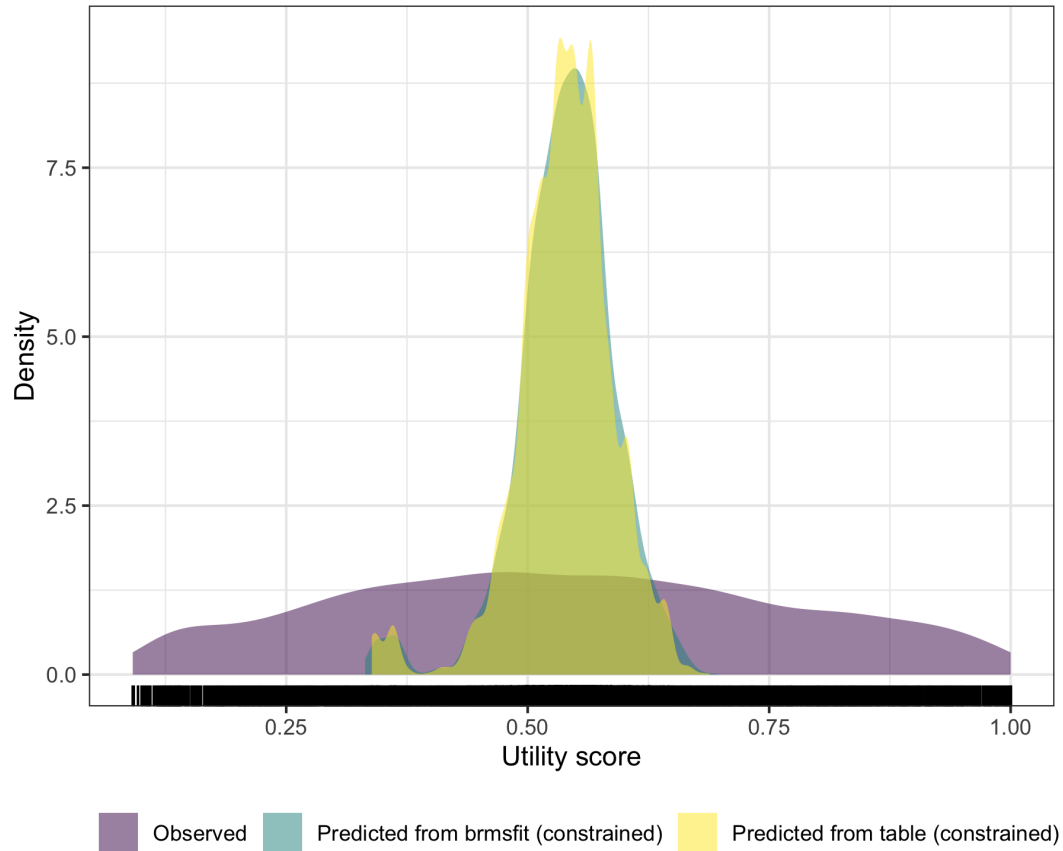


Figure 295: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

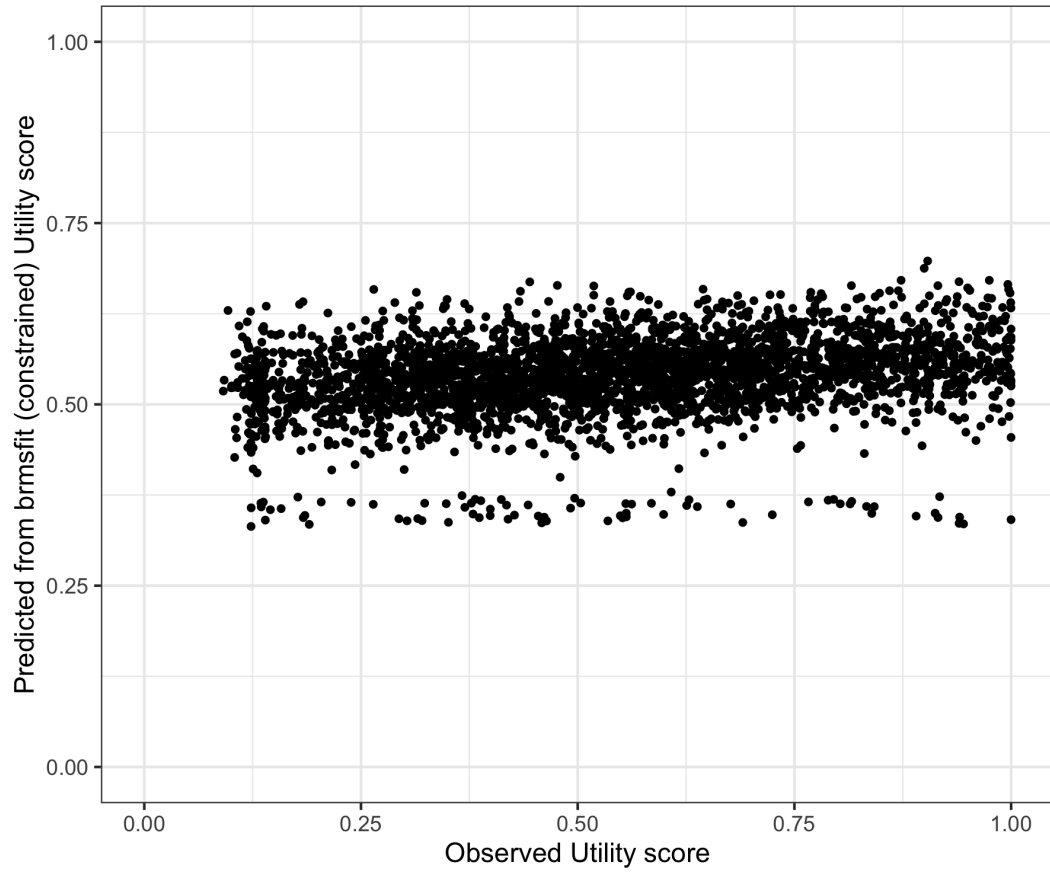


Figure 296: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

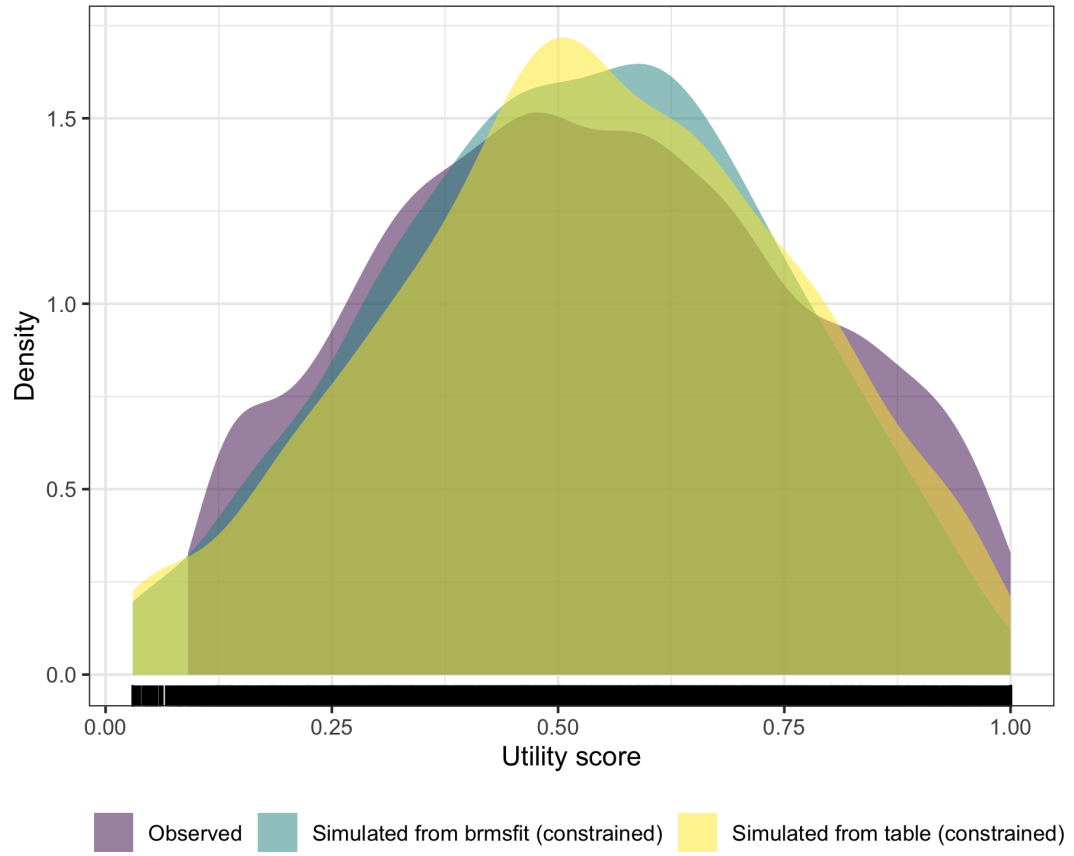


Figure 297: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

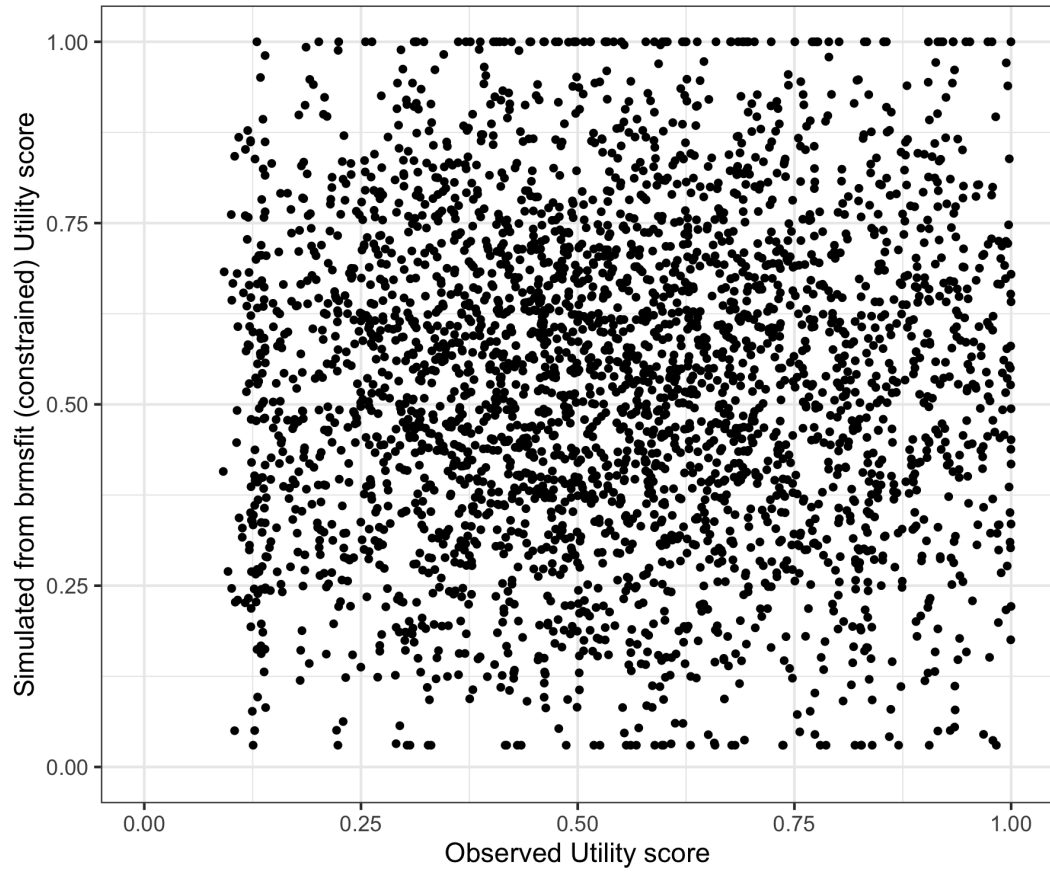


Figure 298: SOFAS with dstudyingworking generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

32 SOFAS with dstudyingworking linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is SOFAS_dstudyingworking_1_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 120 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>.

Table 63: SOFAS with dstudyingworking linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3216)							
sd(Intercept)	0.58	0.17	0.12	0.74	1.74	6	24
Population-Level Effects:							
Intercept	-1.00	0.06	-1.13	-0.87	1.00	2 733	4 261
SOFAS_scaled	0.96	0.09	0.78	1.14	1.00	3 026	4 141
dstudyingworkingBoth	0.12	0.04	0.04	0.21	1.01	2 178	3 967
dstudyingworkingStudy	0.12	0.04	0.05	0.19	1.00	2 061	3 875
dstudyingworkingWork	0.04	0.04	-0.04	0.13	1.00	2 200	3 793
Family Specific Parameters:							
sigma	0.46	0.16	0.23	0.76	1.77	6	24

Formula: AQOL6D_CLL ~SOFAS_scaled + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 64: SOFAS with dstudyingworking linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.62	0.26	0.064 , 0.915
RMSE	1.07	0.04	1.038 , 1.105

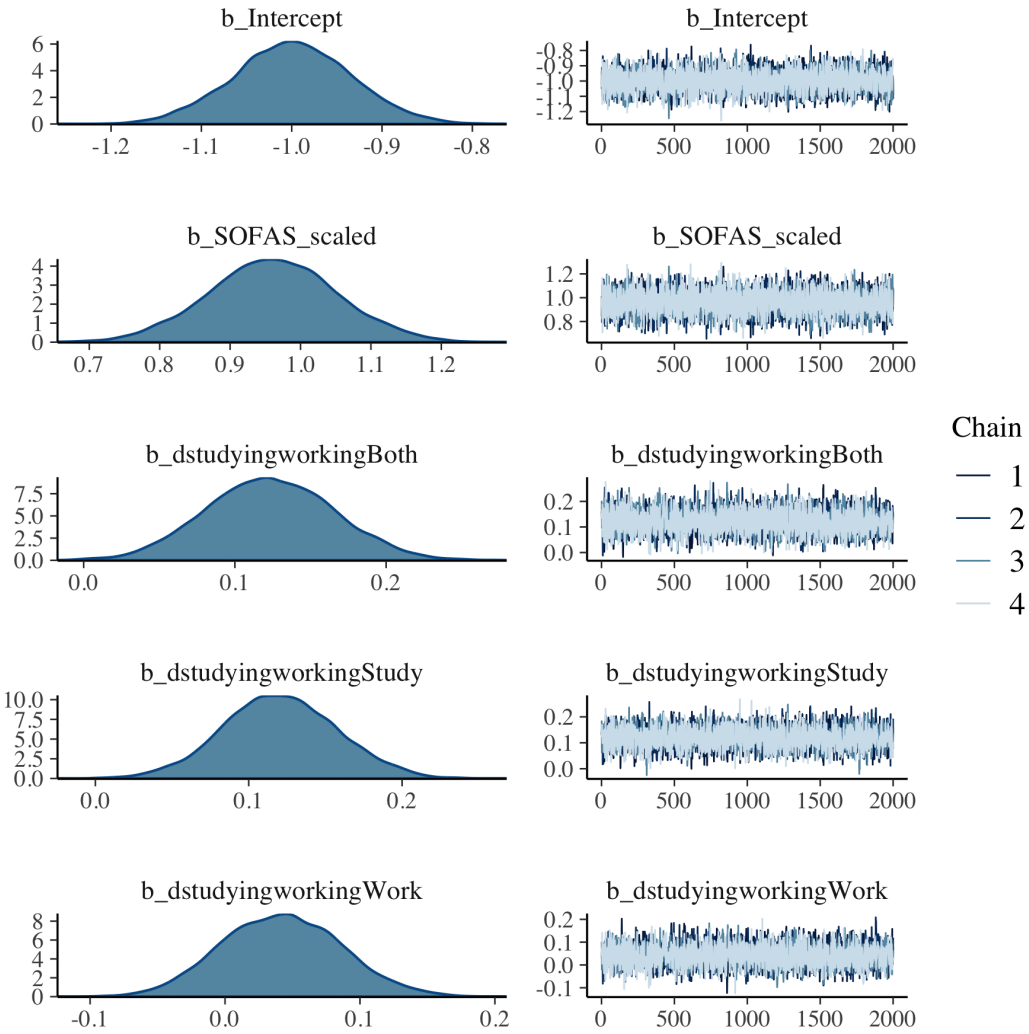


Figure 299: SOFAS with dstudyingworking linear mixed model with complementary log log transformation population level effects

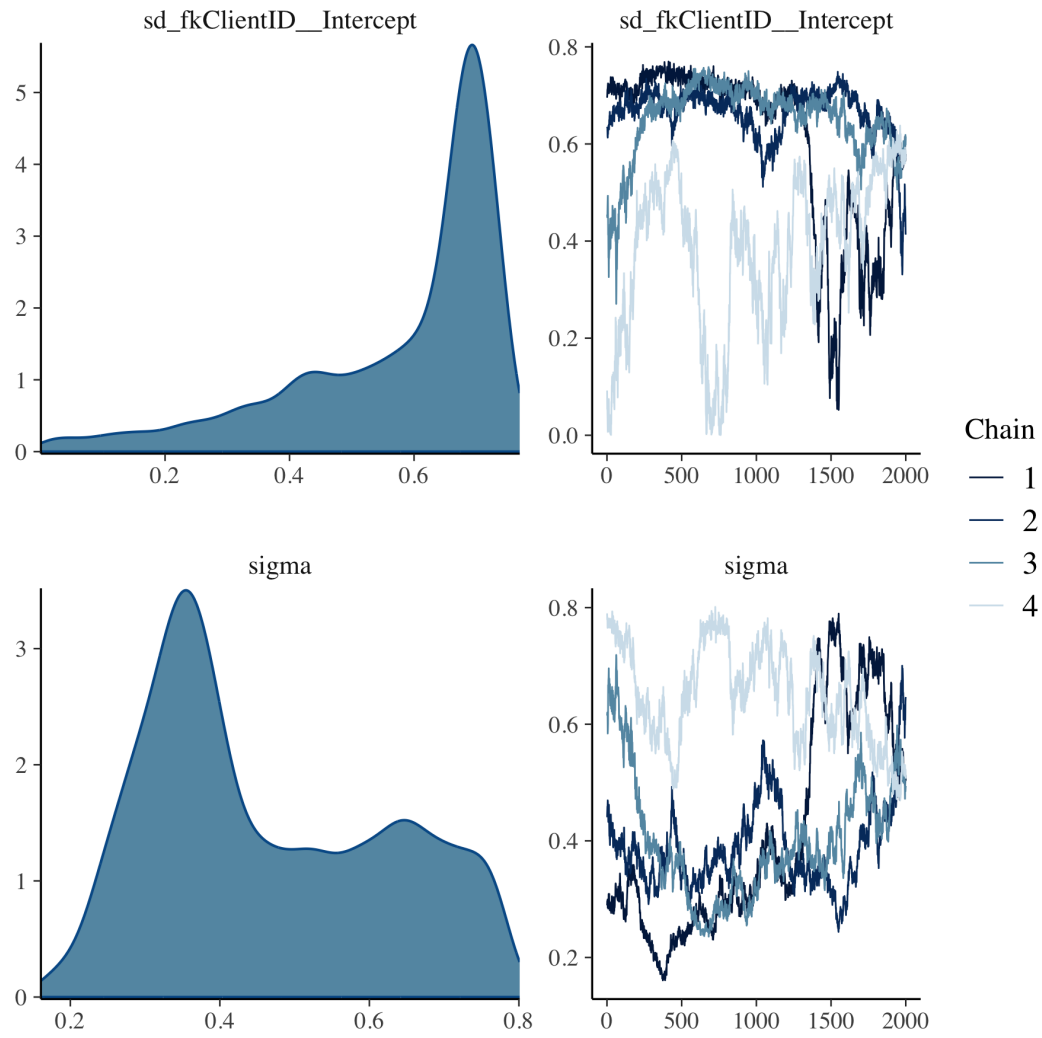


Figure 300: SOFAS with dstudyingworking linear mixed model with complementary log log transformation group level effects

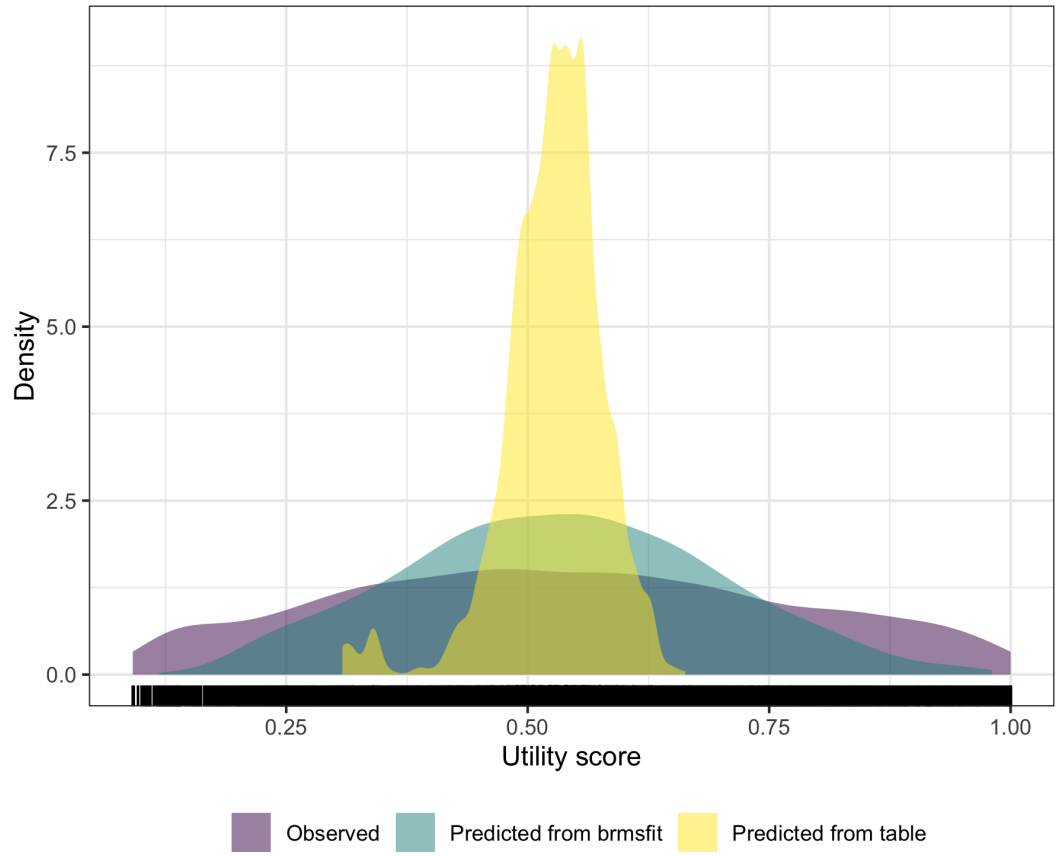


Figure 301: SOFAS with dstudyingworking linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

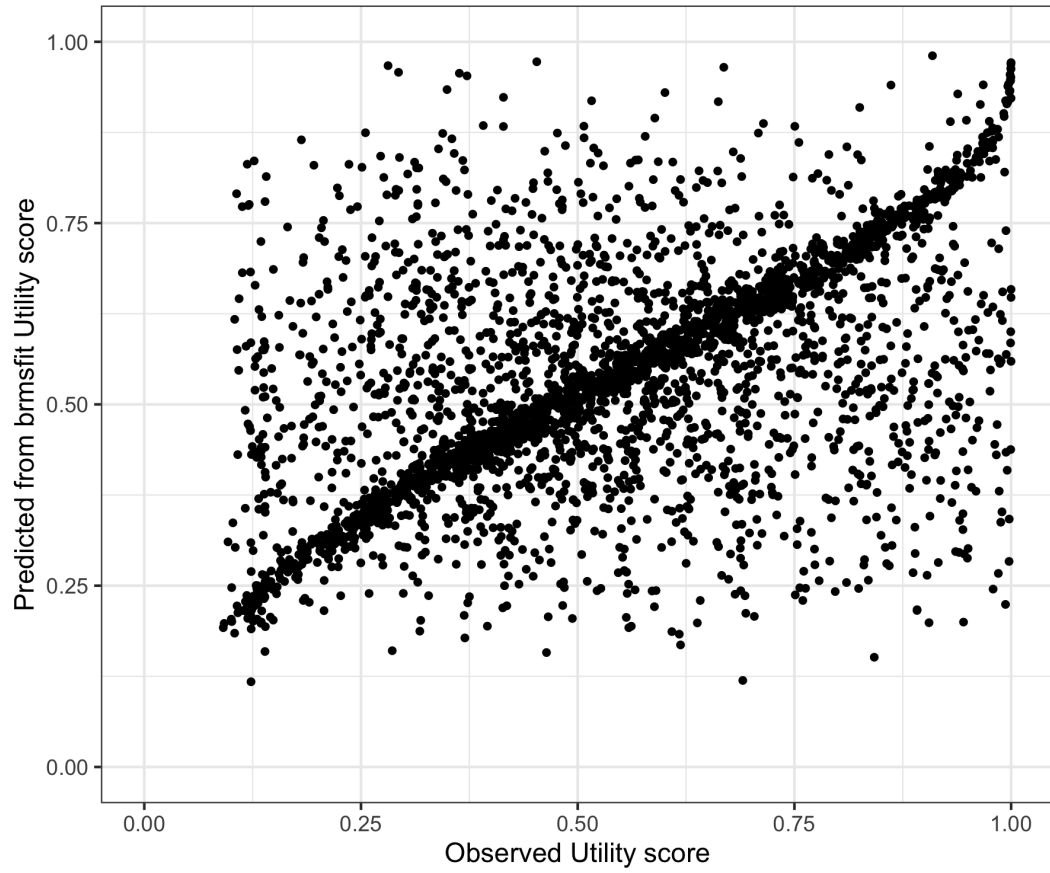


Figure 302: SOFAS with dstudyingworking linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

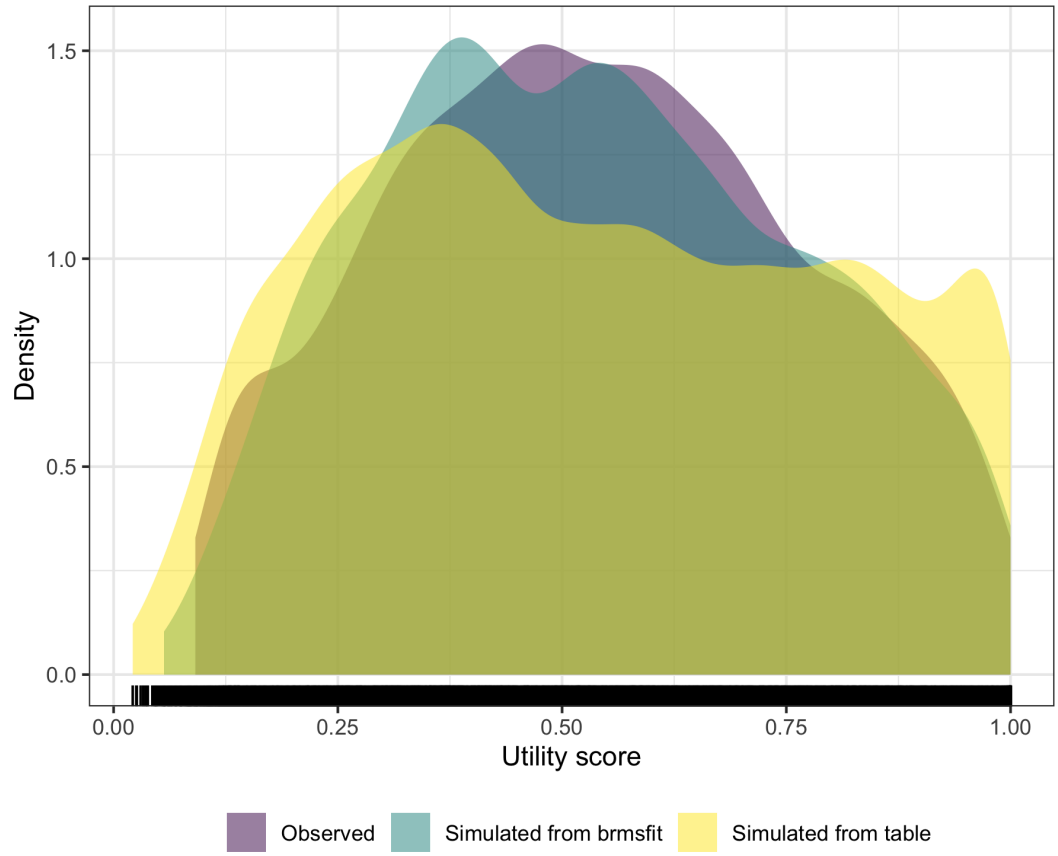


Figure 303: SOFAS with dstudyingworking linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

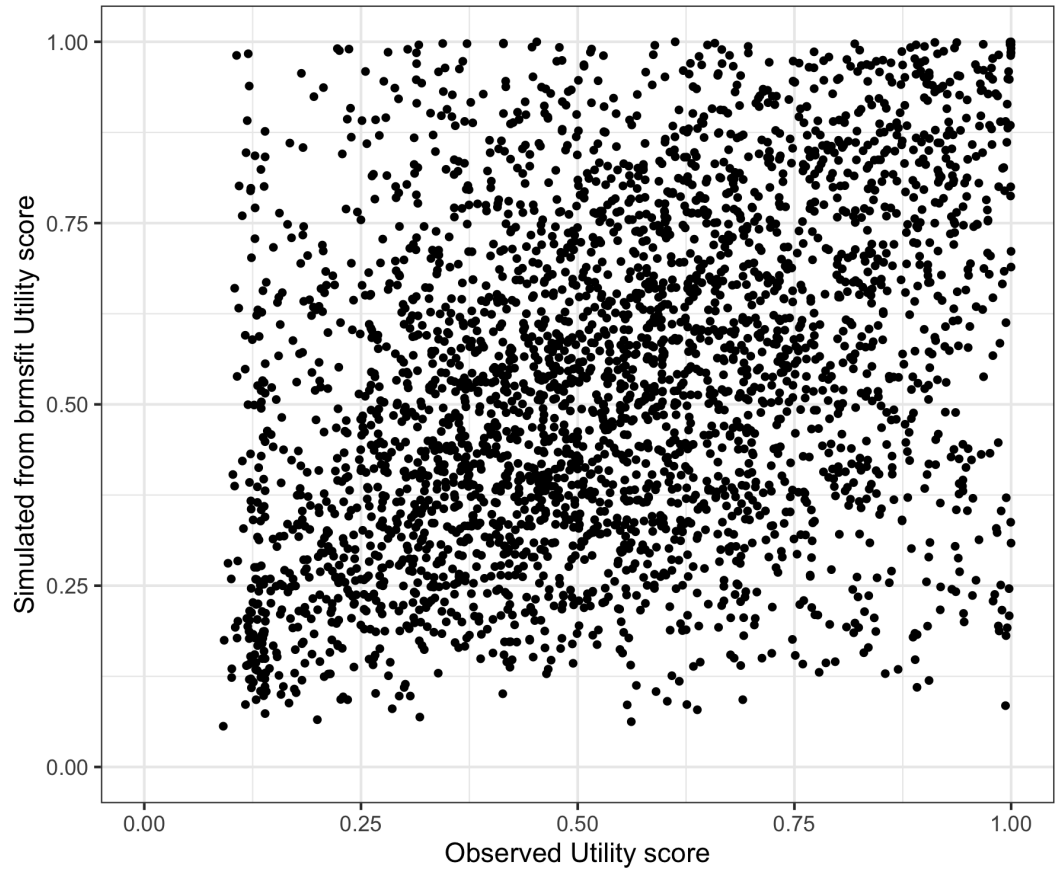


Figure 304: SOFAS with dstudyingworking linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

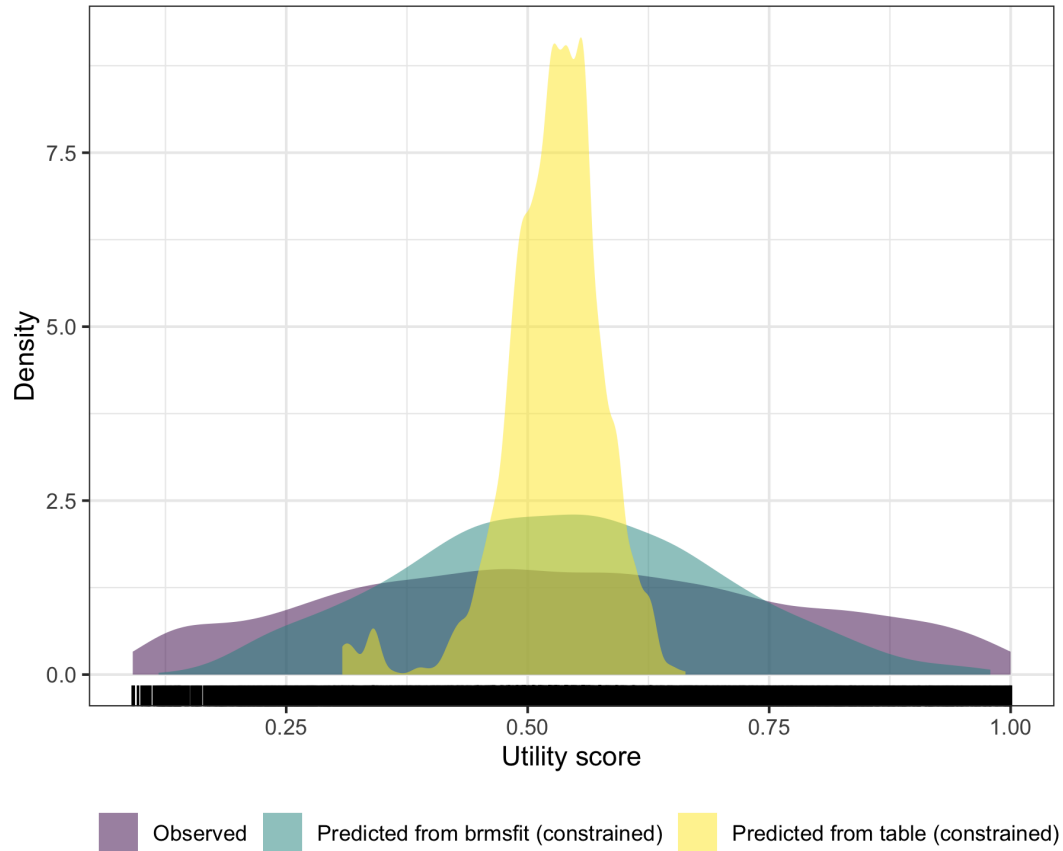


Figure 305: SOFAS with dstudyingworking linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

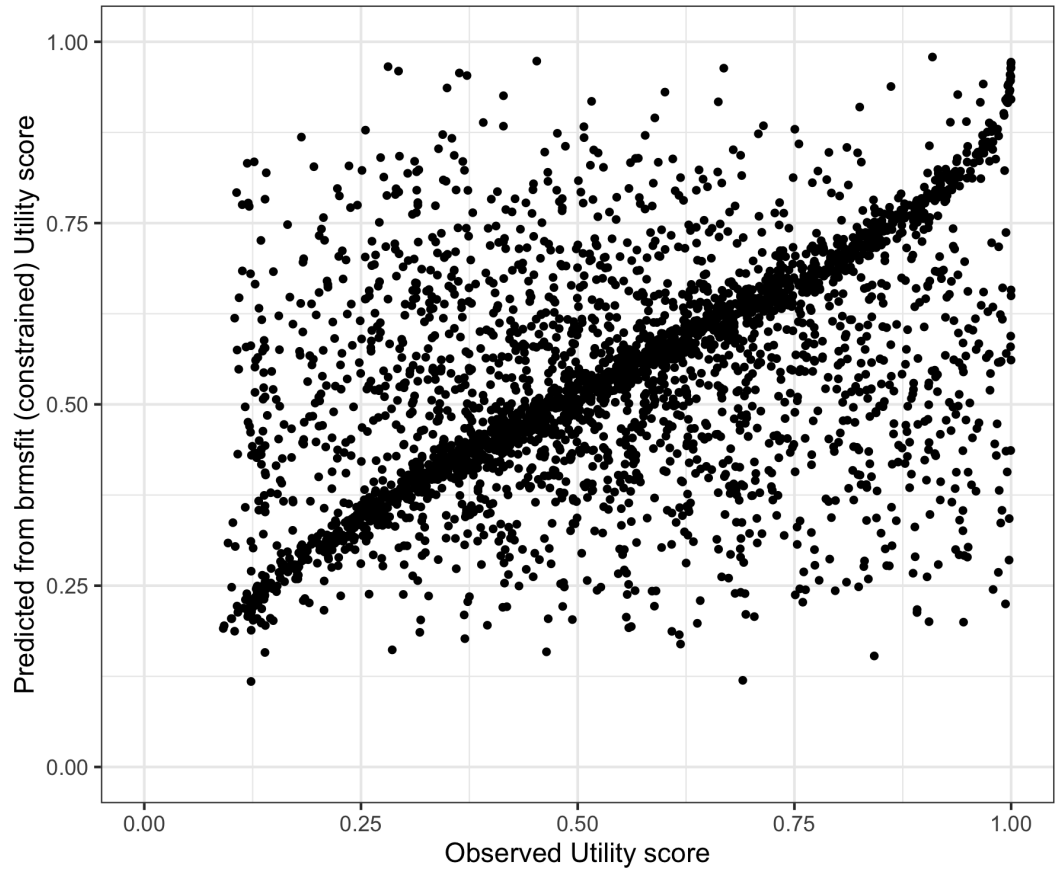


Figure 306: SOFAS with dstudyingworking linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

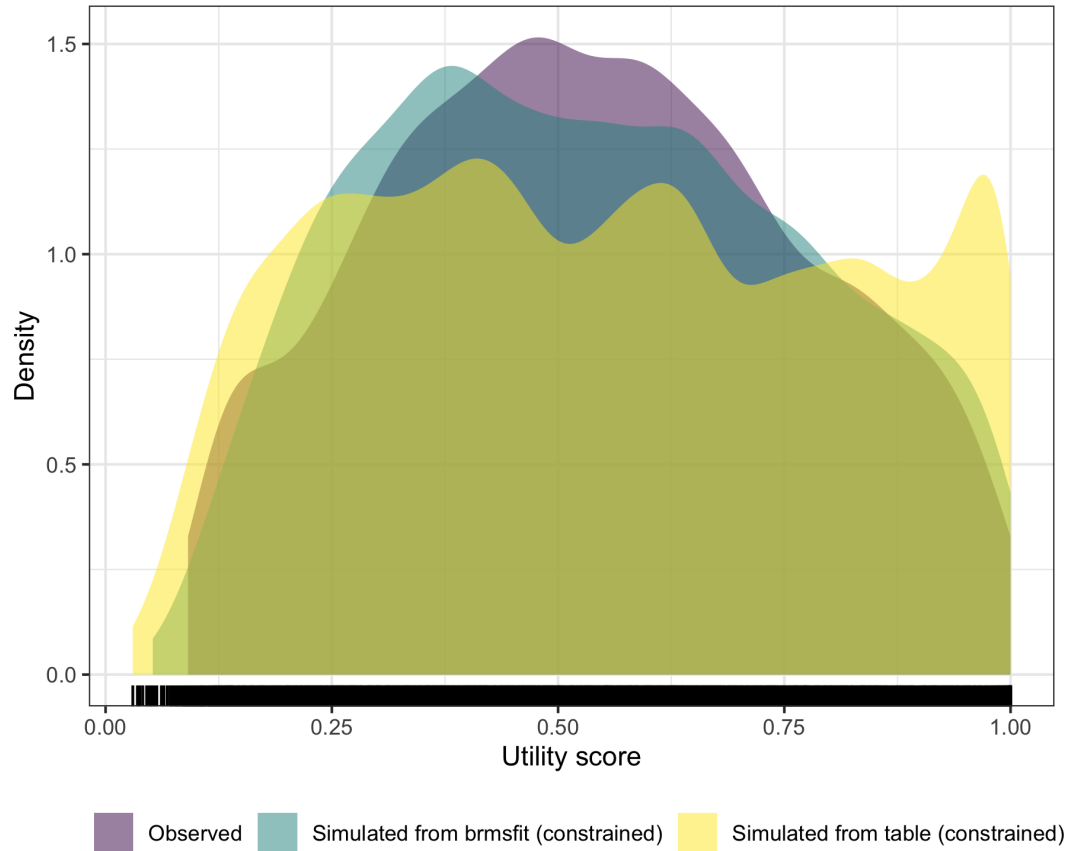


Figure 307: SOFAS with dstudyingworking linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

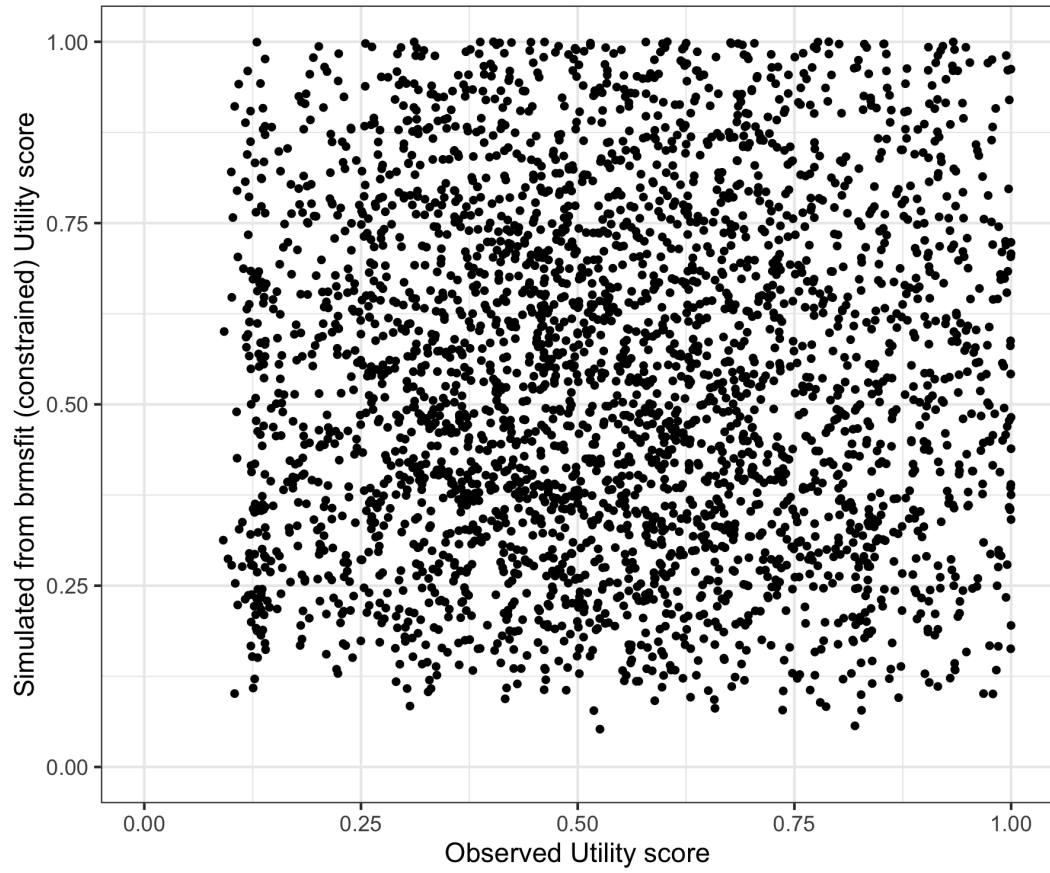


Figure 308: SOFAS with dstudyingworking linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

33 SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - cdaysoor (days out of role); and - dage (age). The catalogue reference for this model is SOFAS_cdaysoor_2_GLM_GSN_LOG.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 65: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3294)							
sd(Intercept)	0.60	0.78	0.00	1.92	3.36	5	11
Population-Level Effects:							
Intercept	6.58	7.50	-0.61	17.52	2.28	5	20
SOFAS_scaled	-0.27	0.80	-1.38	0.56	3.02	5	9
cdaysoor	0.00	0.02	-0.01	0.08	2.12	5	16
dage	-0.34	0.37	-0.90	-0.01	2.32	5	11
Family Specific Parameters:							
sigma	1.21	1.51	0.20	3.82	3.16	5	11

Formula: AQOL6D ~SOFAS_scaled + cdaysoor + dage + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS

and Tail_ESS are effective sample size measures, and Rhat is the potential

scale reduction factor on split chains (at convergence, Rhat = 1).

Table 66: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.34	0.16	0.166 , 0.5
RMSE	123.65	192.30	0.294 , 202.616

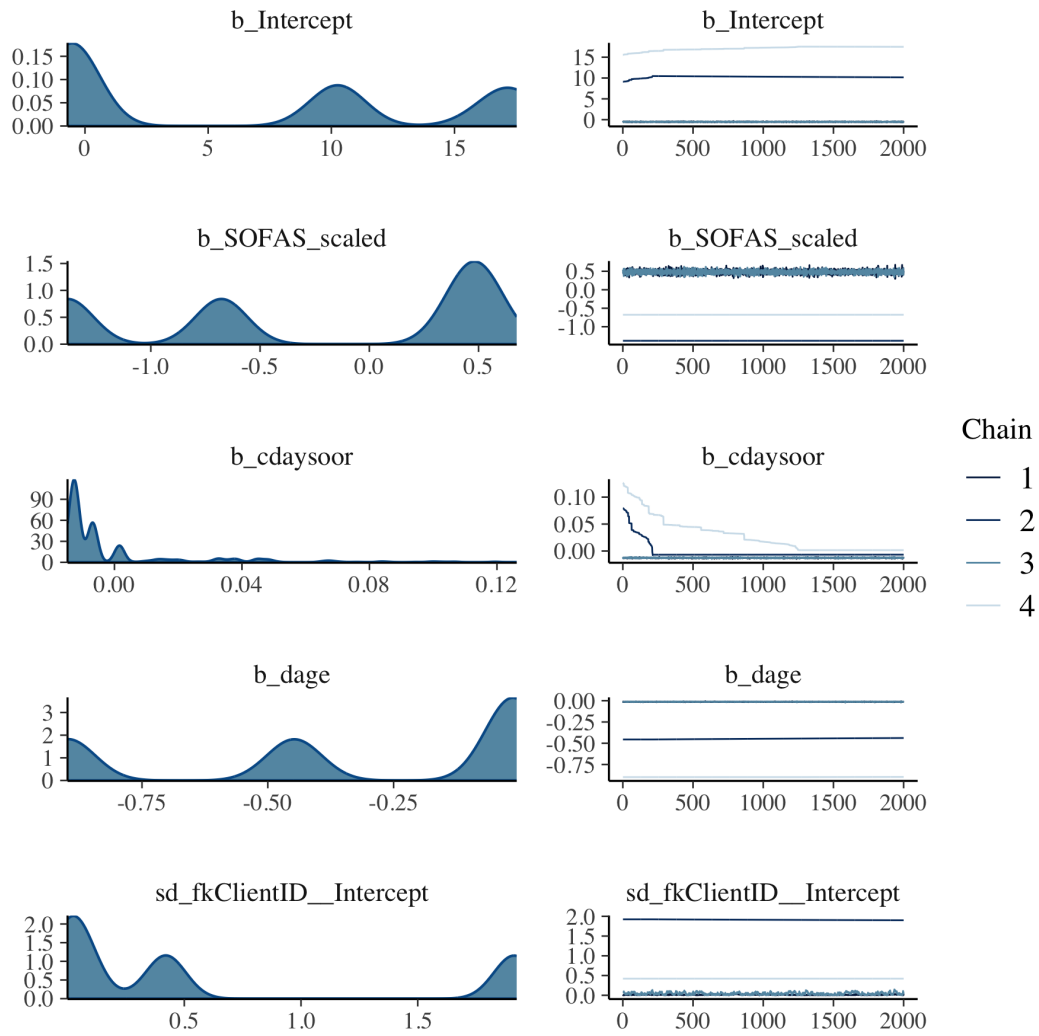


Figure 309: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link population level effects

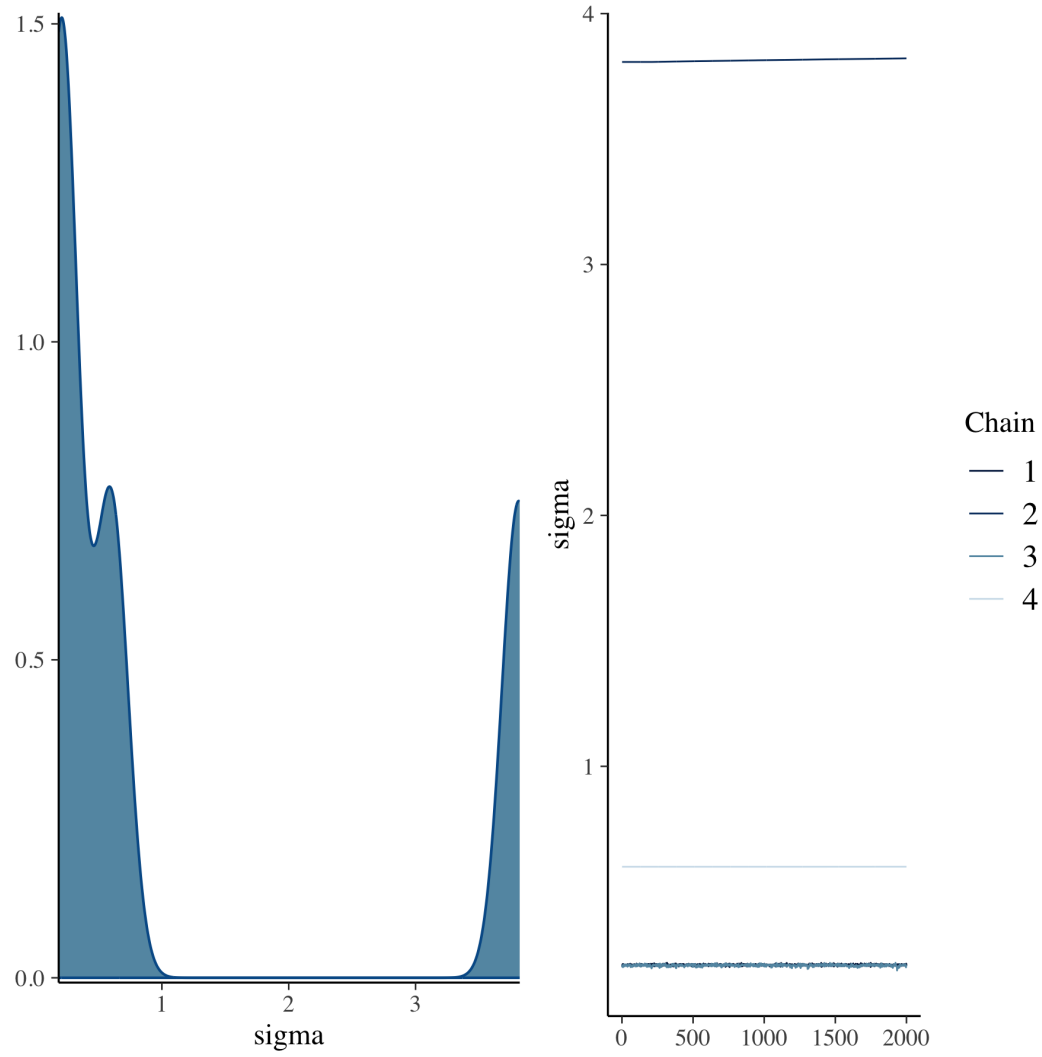


Figure 310: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link group level effects

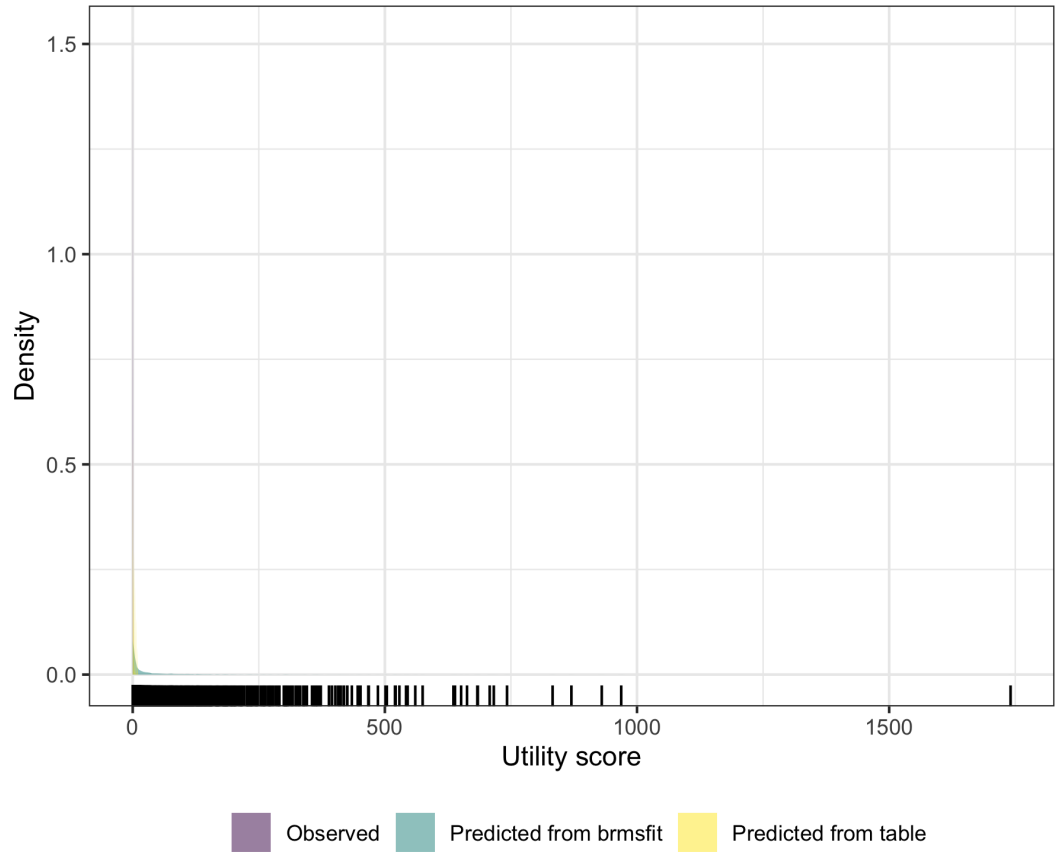


Figure 311: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

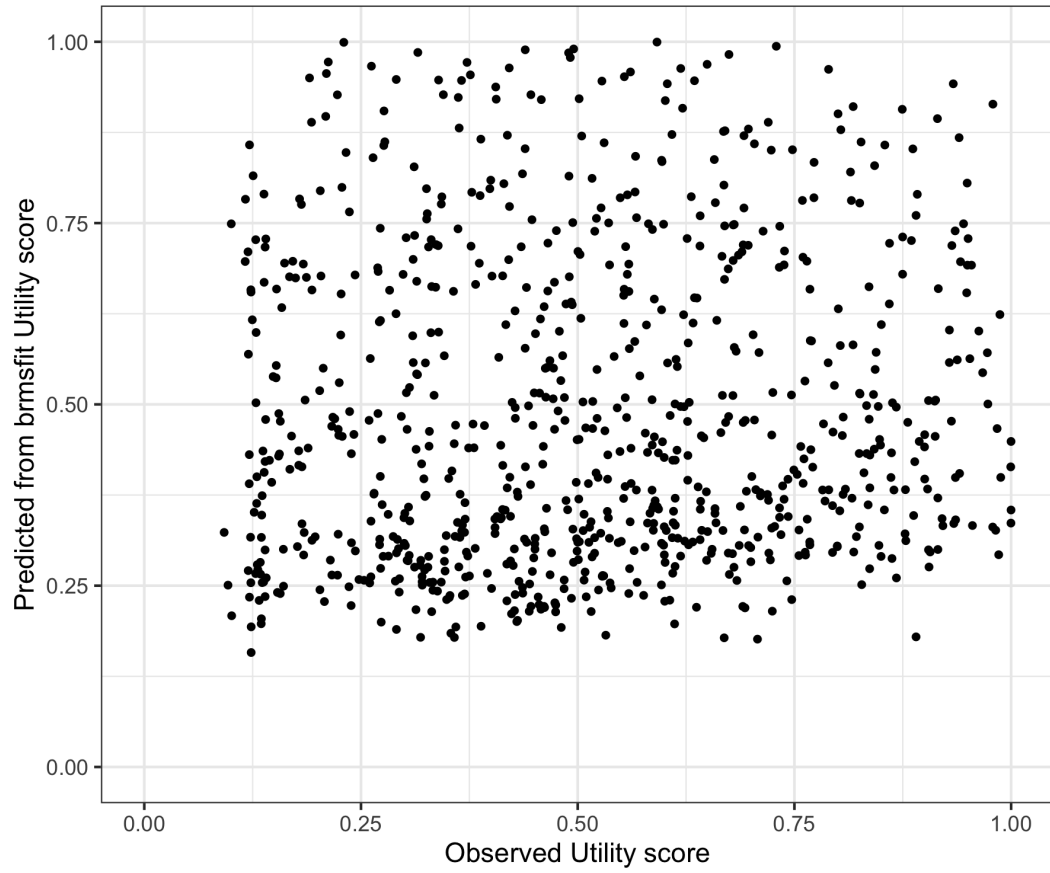


Figure 312: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

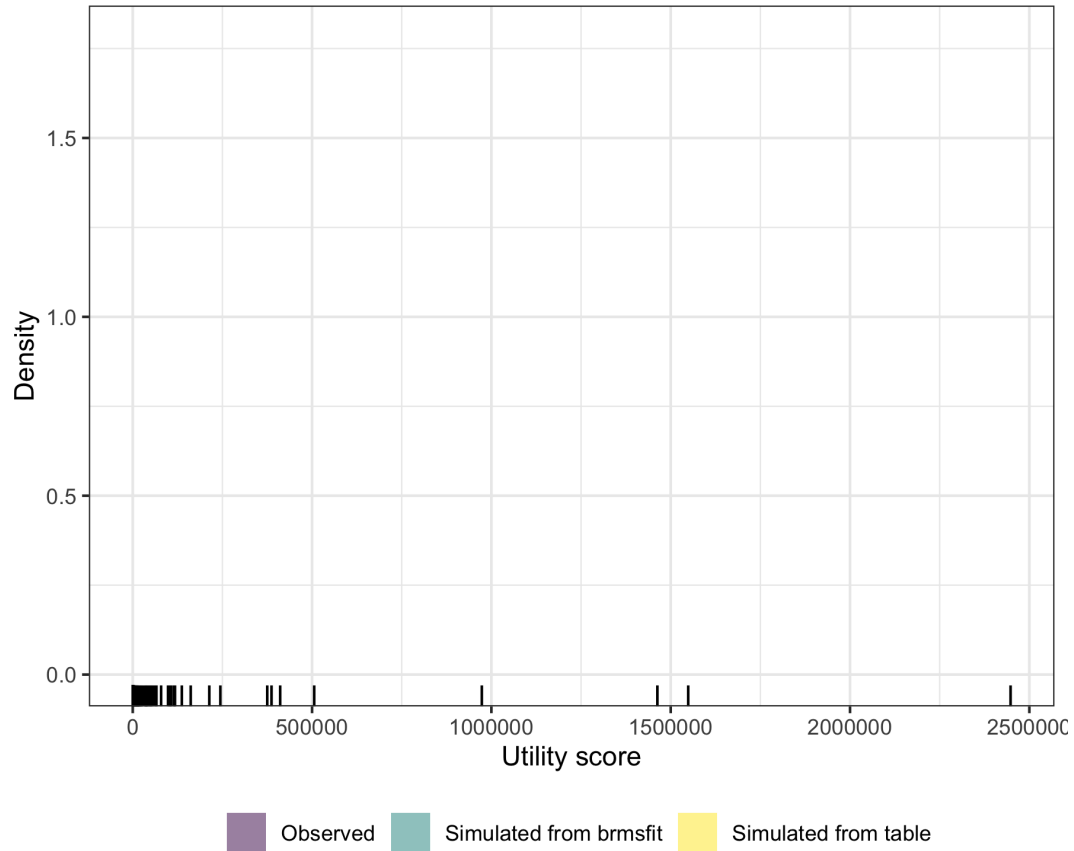


Figure 313: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

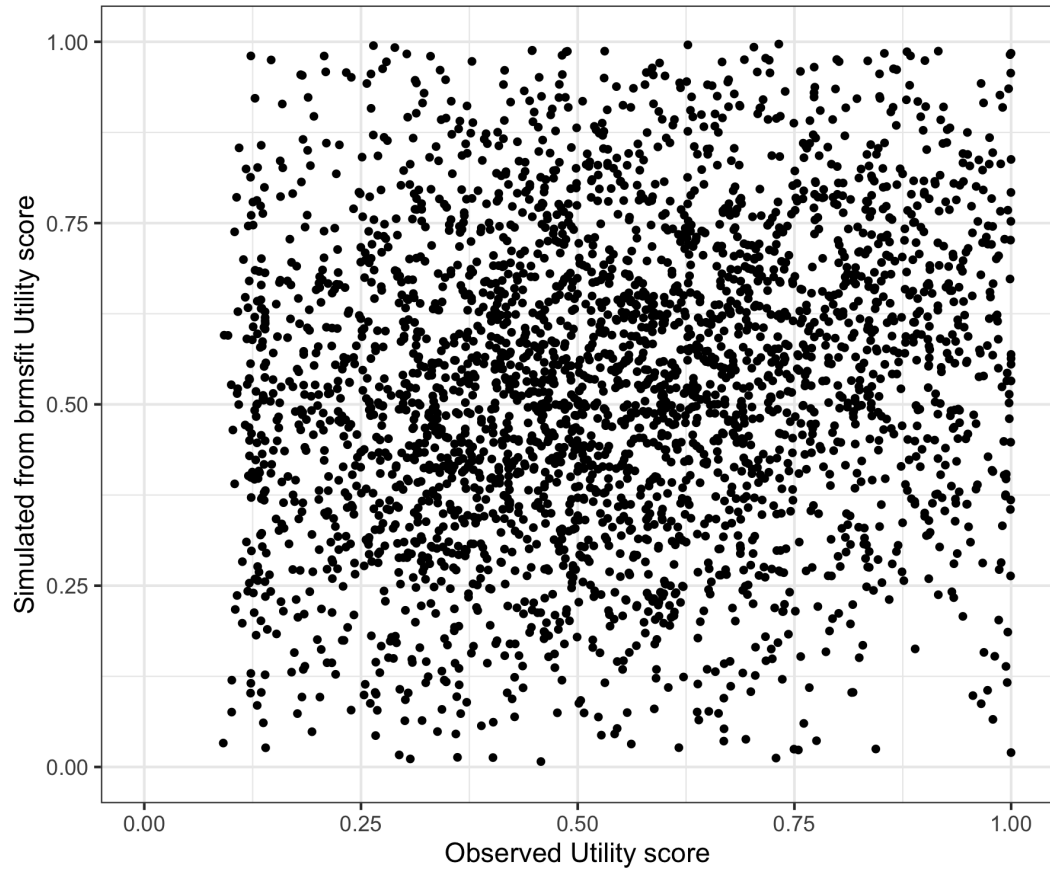


Figure 314: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

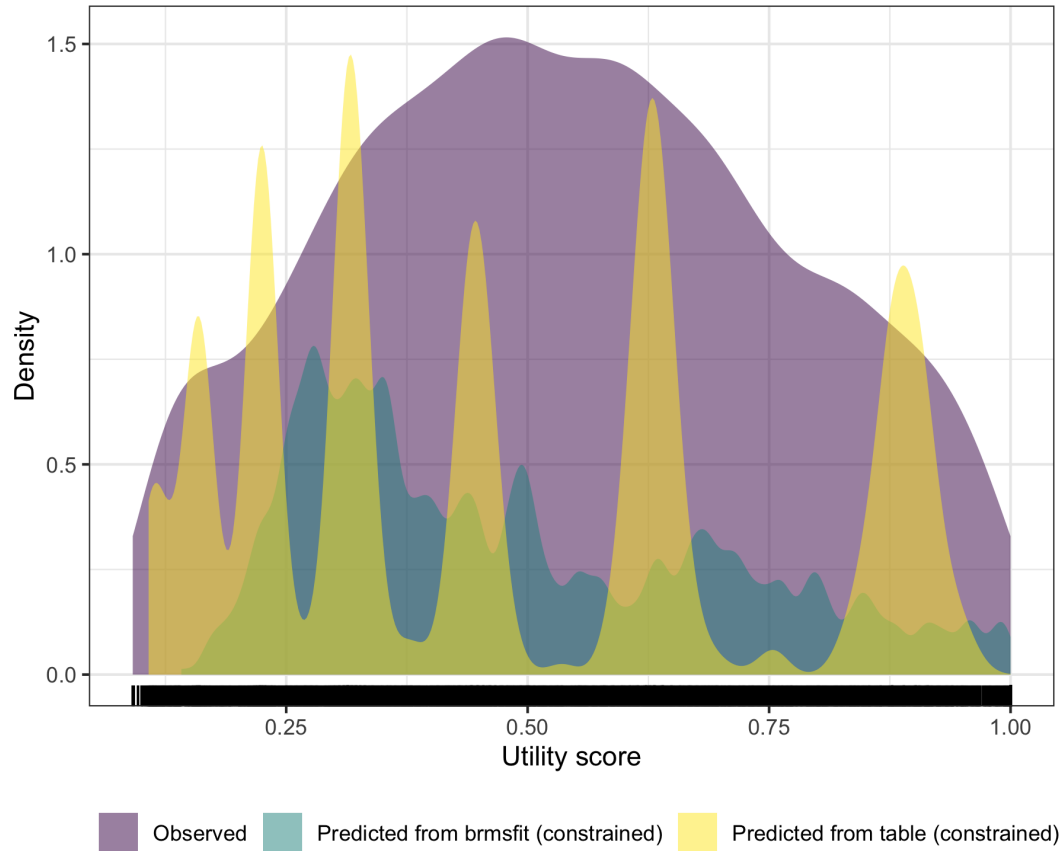


Figure 315: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

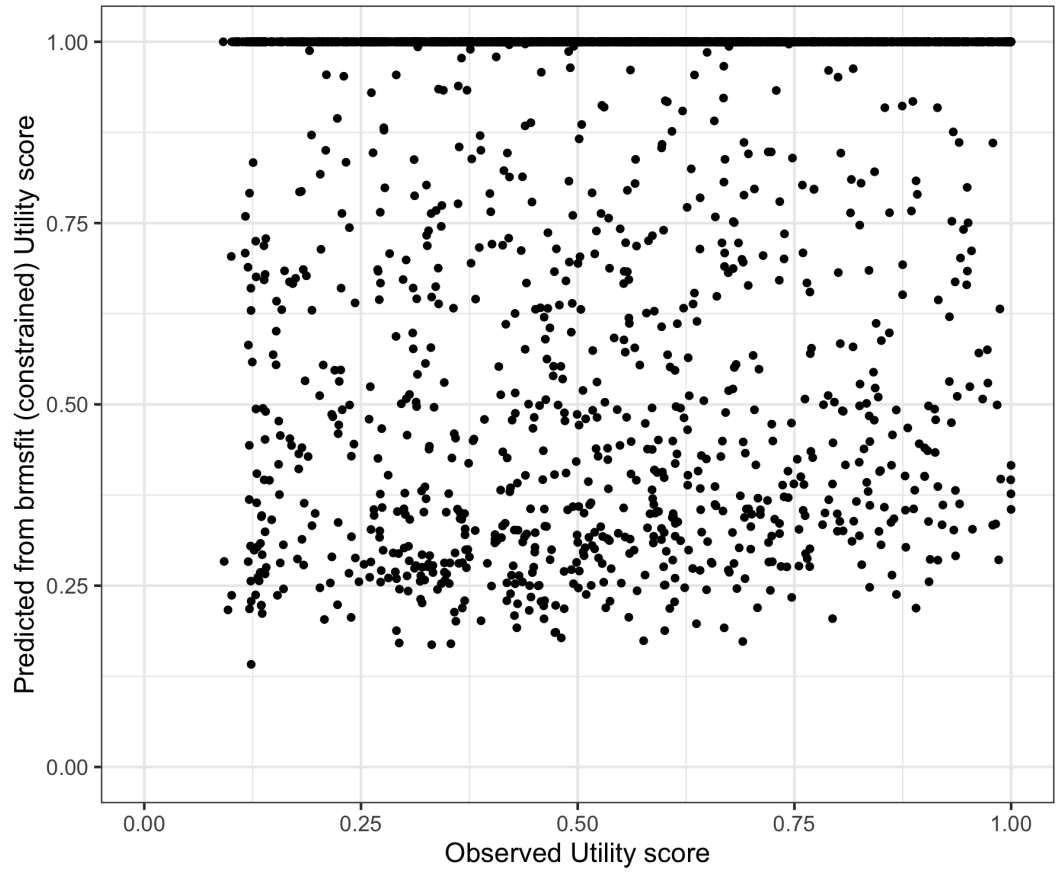


Figure 316: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

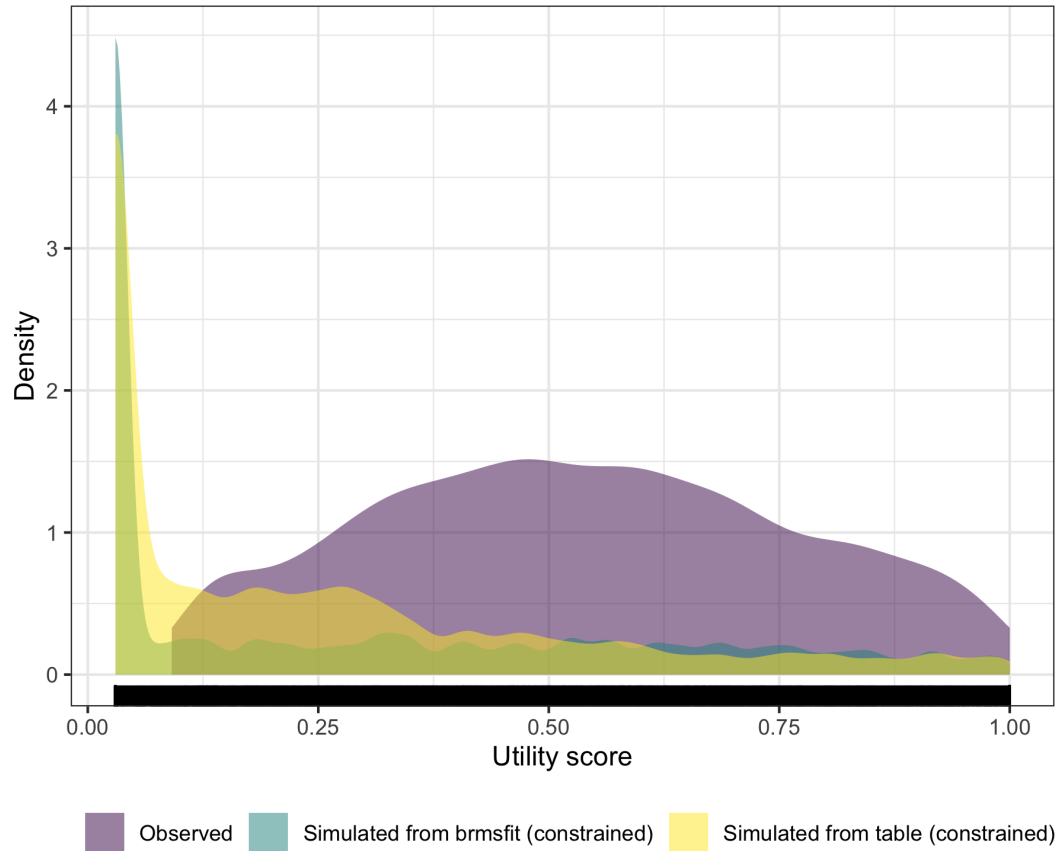


Figure 317: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

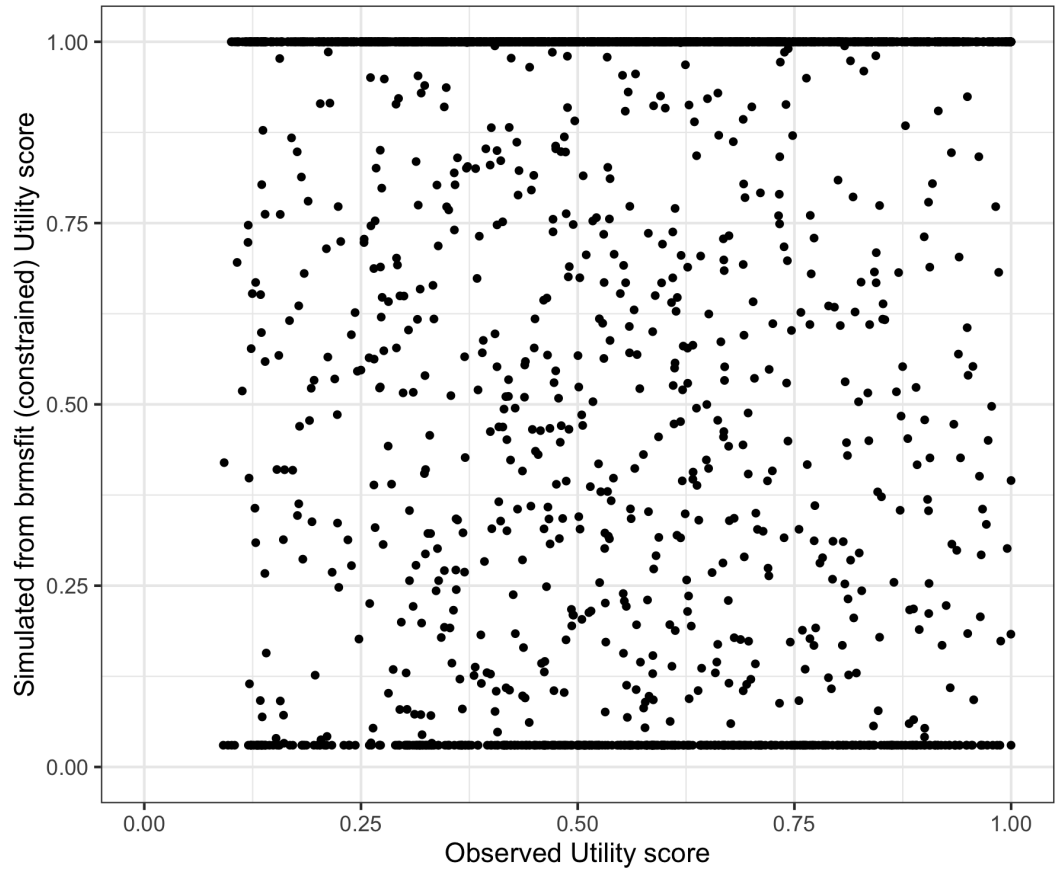


Figure 318: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

34 SOFAS with cdaysoor linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - cdaysoor (days out of role); and - dage (age). The catalogue reference for this model is SOFAS_cdaysoor_2_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 136 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>.

Table 67: SOFAS with cdaysoor linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3294)							
sd(Intercept)	0.43	0.22	0.03	0.71	1.87	6	27
Population-Level Effects:							
Intercept	0.03	0.09	-0.15	0.21	1.00	2 405	3 379
SOFAS_scaled	0.75	0.09	0.58	0.92	1.00	2 124	2 244
cdaysoor	-0.02	0.00	-0.02	-0.02	1.00	2 841	4 179
dage	-0.03	0.00	-0.03	-0.02	1.00	2 011	3 053
Family Specific Parameters:							
sigma	0.50	0.19	0.16	0.73	1.88	6	24

Formula: AQOL6D_CLL ~SOFAS_scaled + cdaysoor + dage + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 68: SOFAS with cdaysoor linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.54	0.28	0.161 , 0.958
RMSE	1.08	0.05	1.039 , 1.13

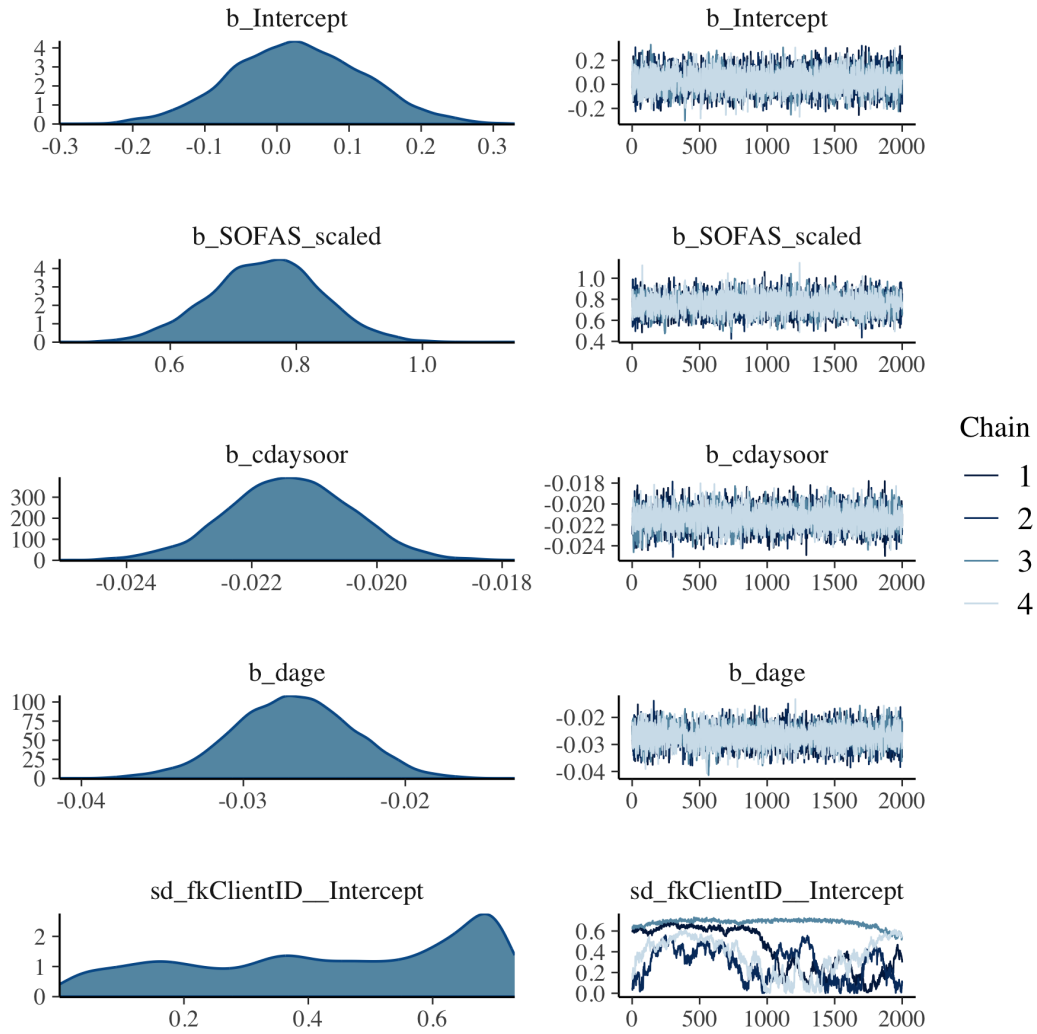


Figure 319: SOFAS with cdaysoor linear mixed model with complementary log log transformation population level effects

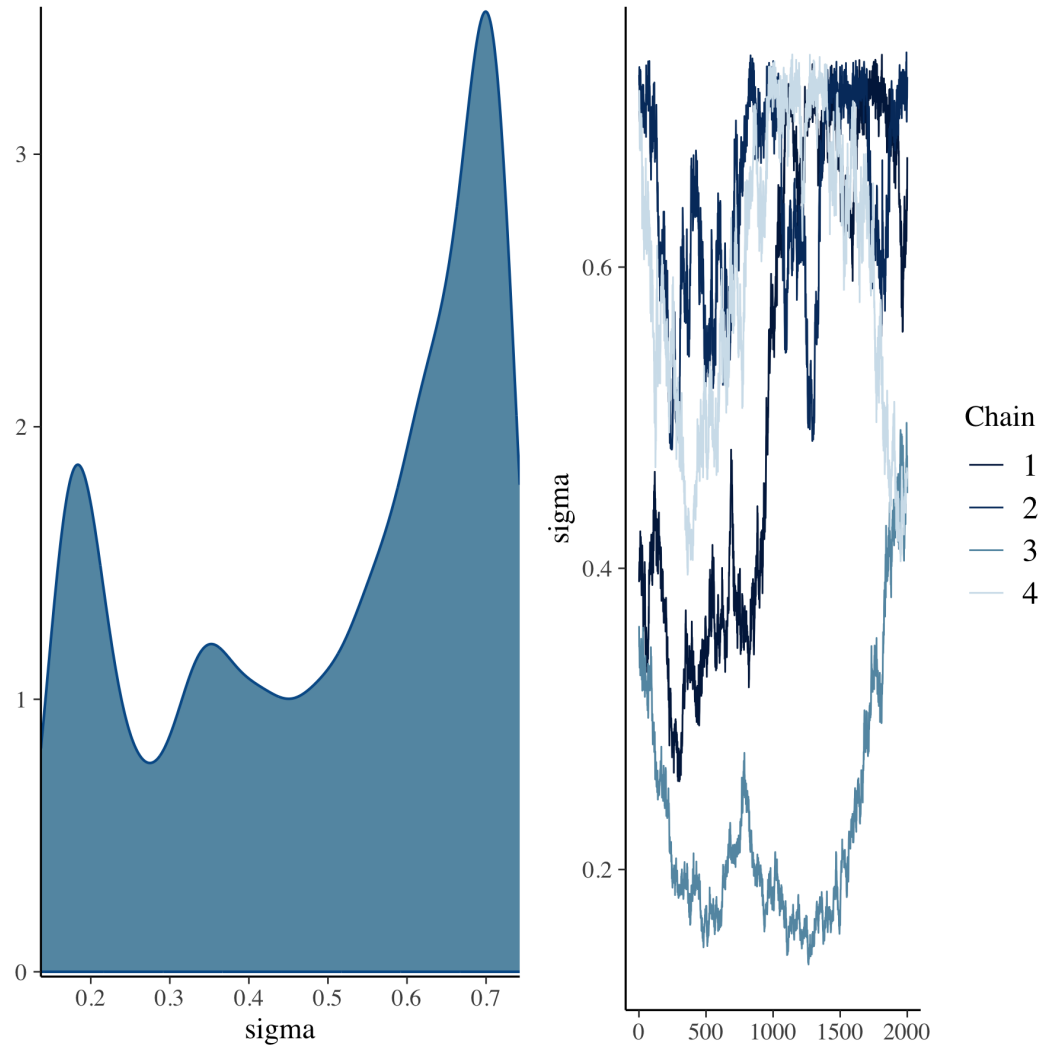


Figure 320: SOFAS with cdaysoor linear mixed model with complementary log log transformation group level effects

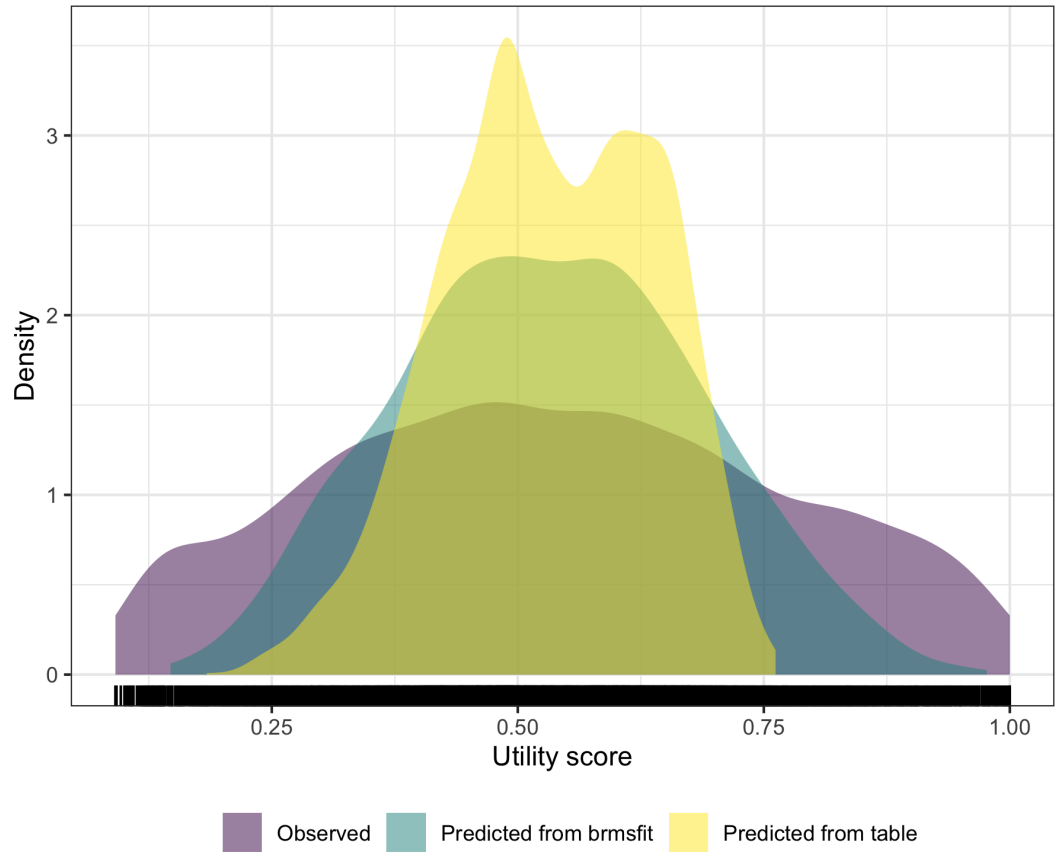


Figure 321: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

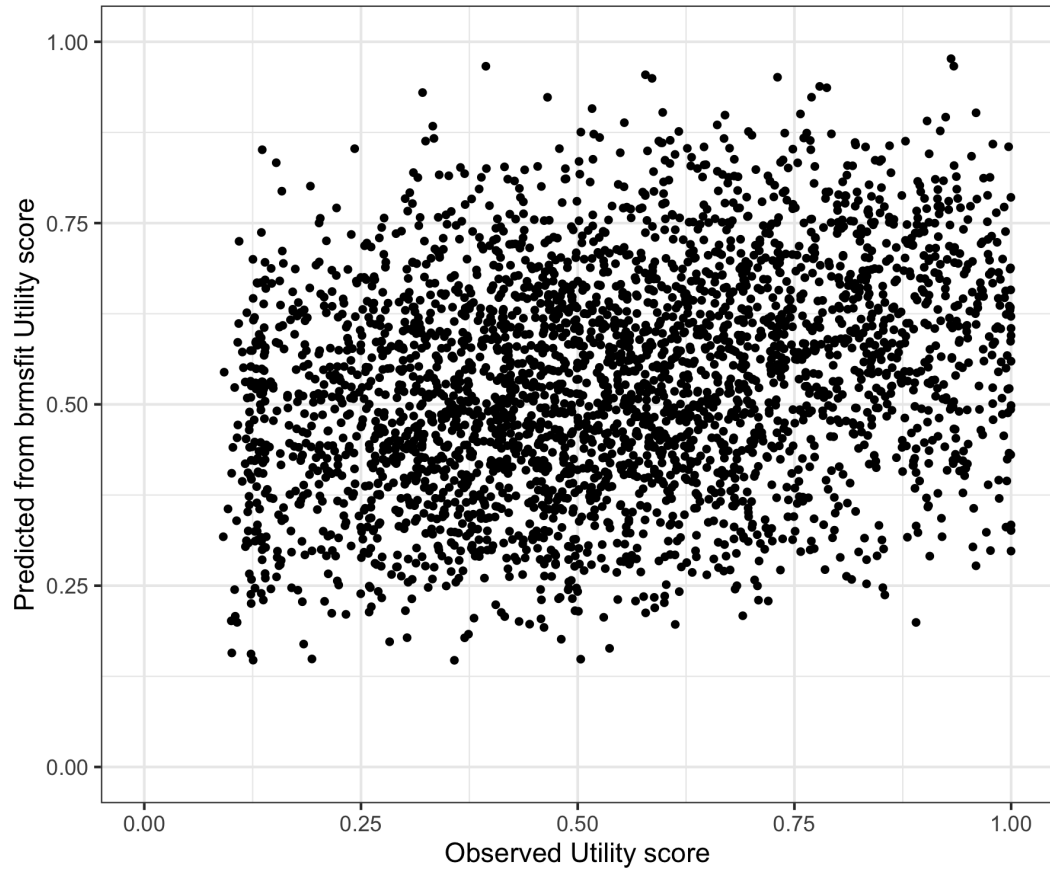


Figure 322: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

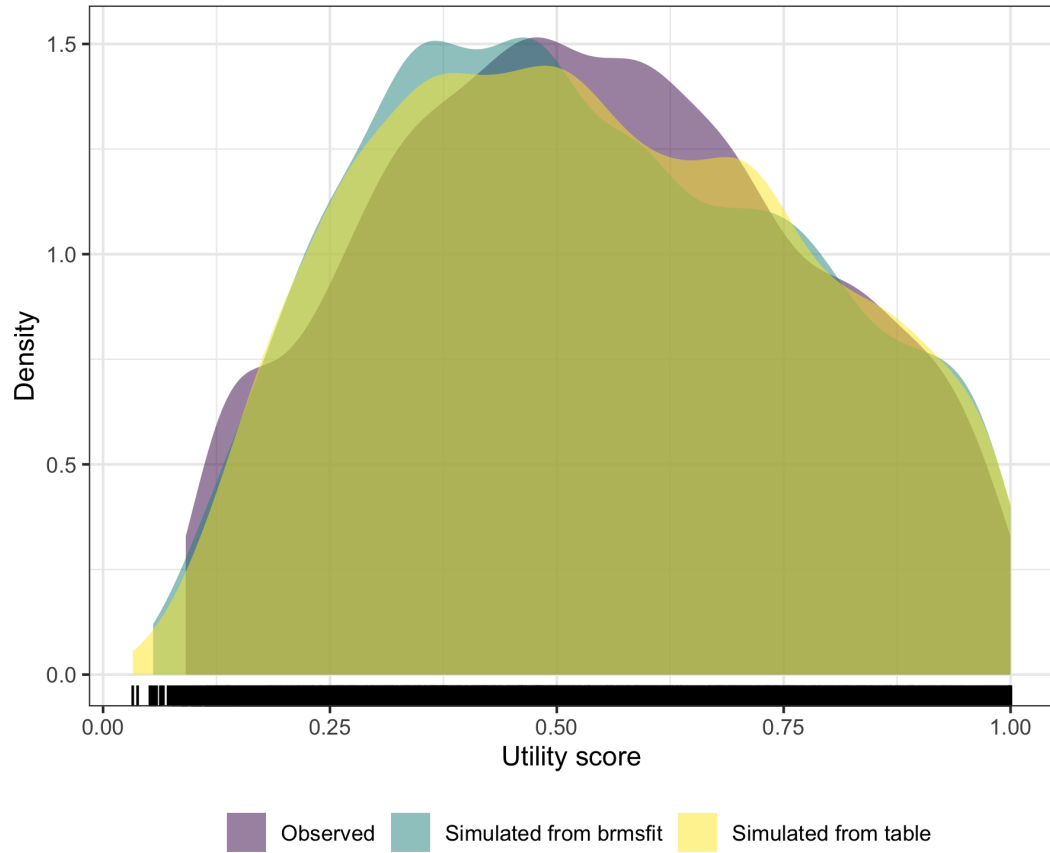


Figure 323: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

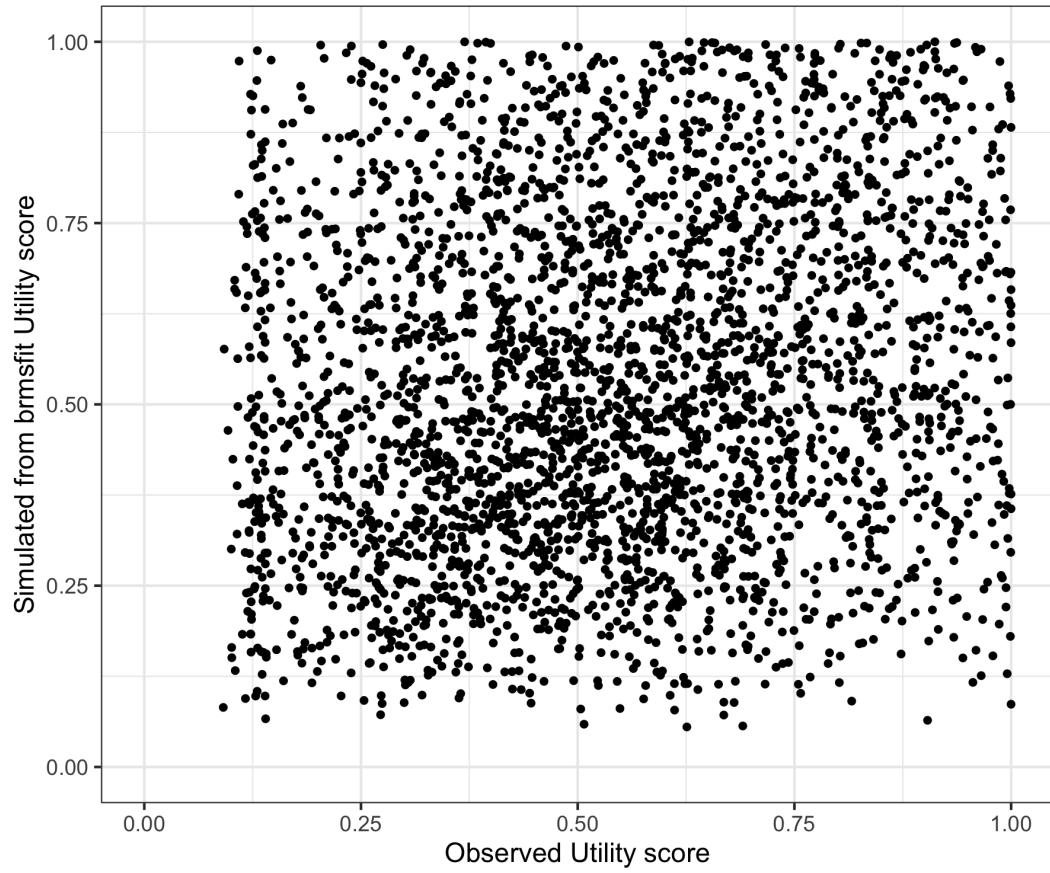


Figure 324: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

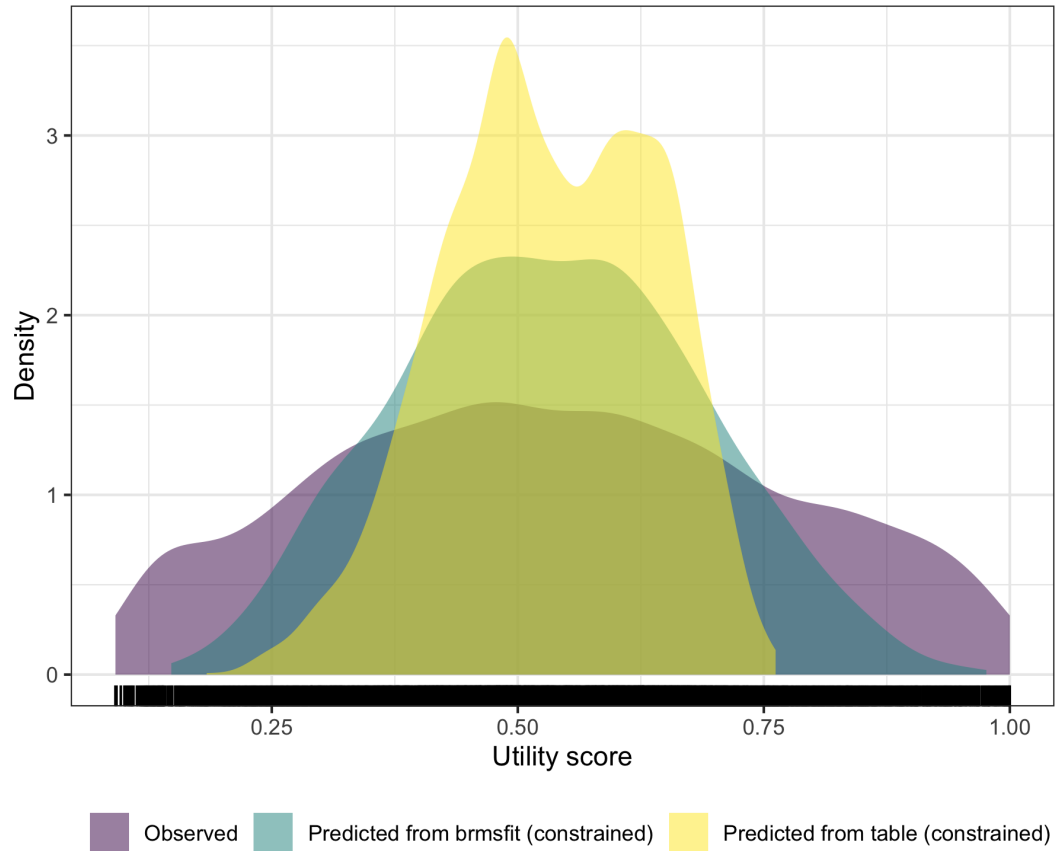


Figure 325: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

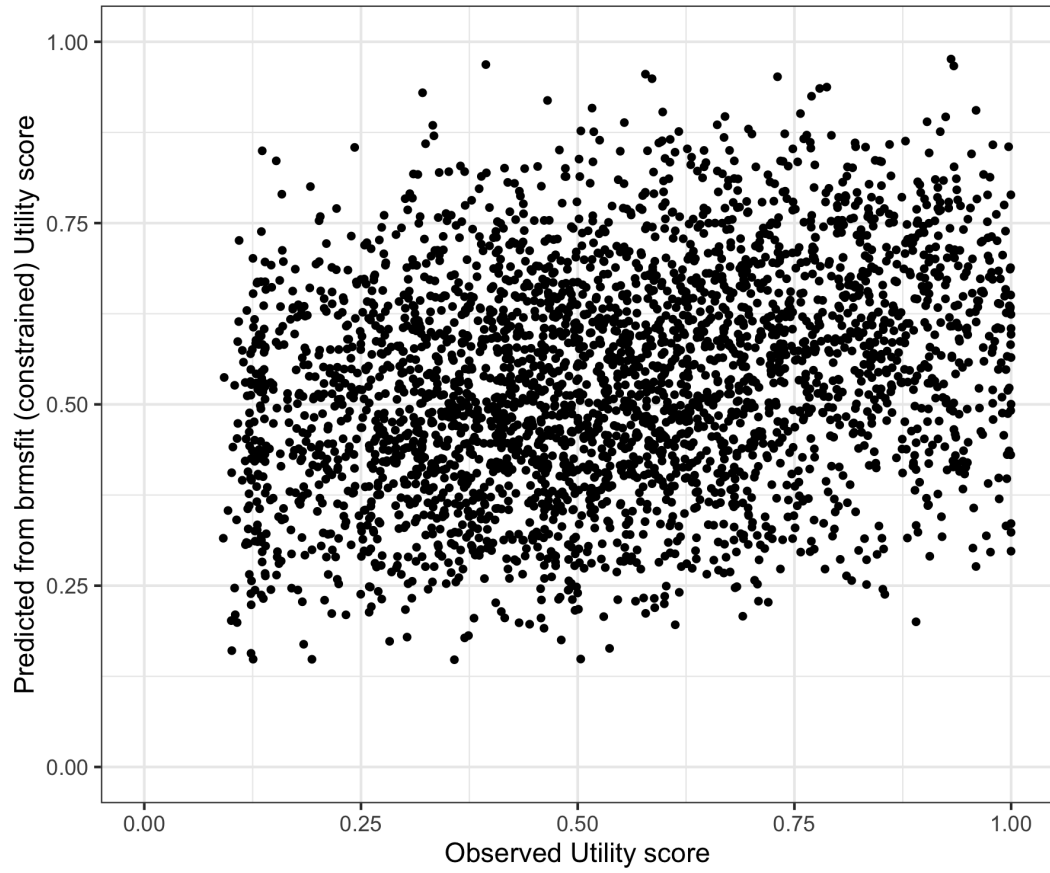


Figure 326: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

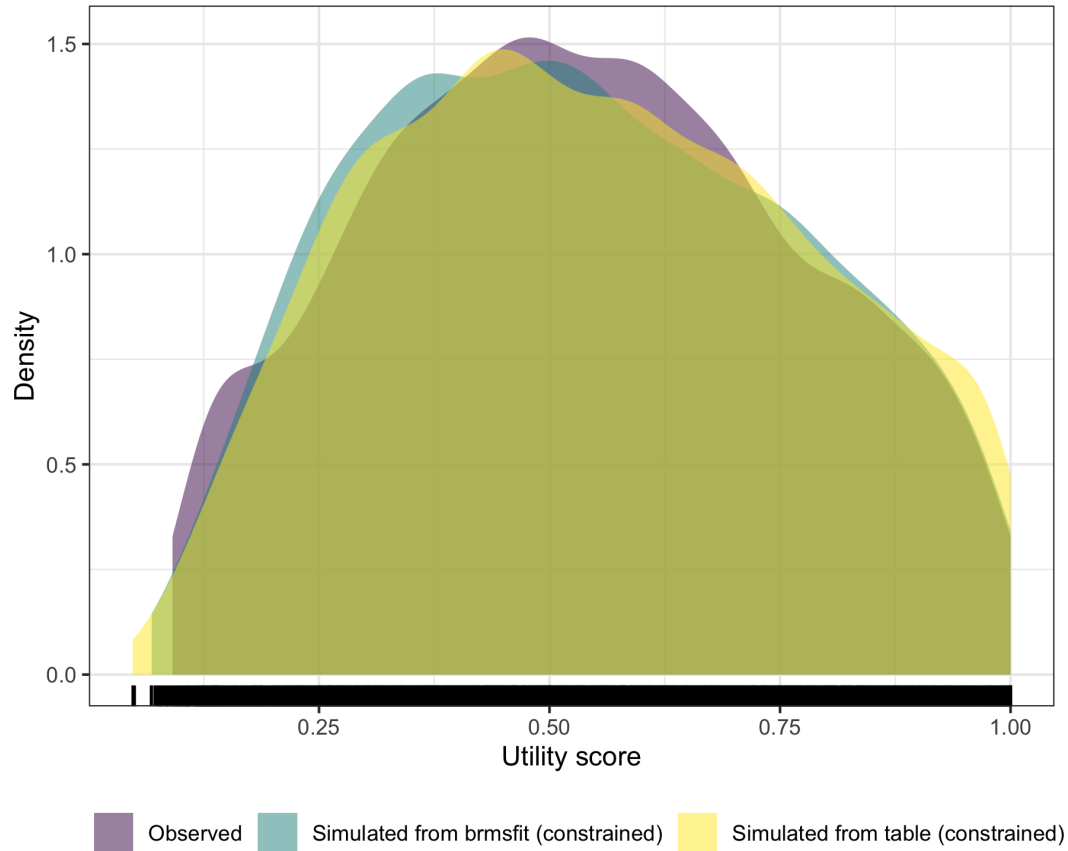


Figure 327: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

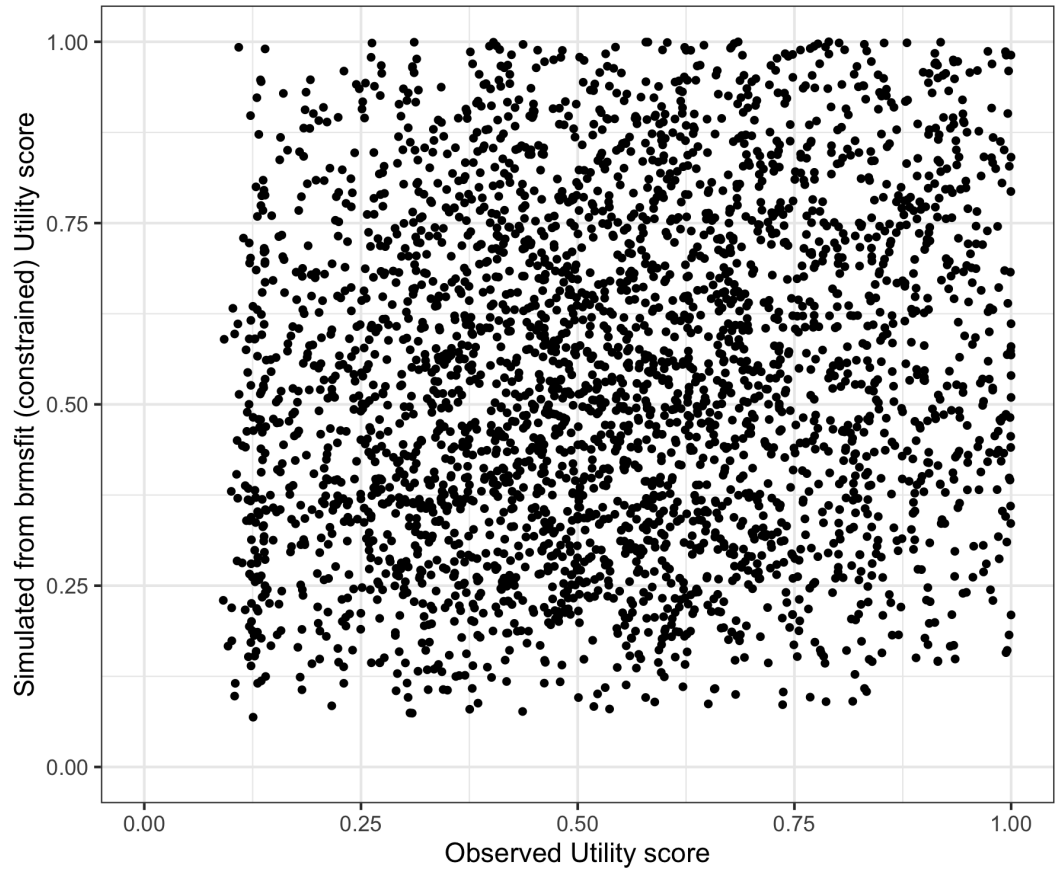


Figure 328: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

35 SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - cdaysoor (days out of role); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is SOFAS_cdaysoor_3_GLM_GSN_LOG.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Table 69: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3294)							
sd(Intercept)	0.71	1.16	0.00	3.44	2.97	5	11
Population-Level Effects:							
Intercept	0.30	1.36	-0.85	2.53	2.28	5	11
SOFAS_scaled	-0.27	0.79	-1.38	0.56	2.72	5	5
cdaysoor	-0.01	0.01	-0.01	-0.00	2.00	5	12
dgenderMale	-0.34	0.46	-0.99	0.12	2.94	5	11
dgenderOther	0.64	0.76	-0.21	1.46	2.31	5	55
Family Specific Parameters:							
sigma	0.74	0.81	0.20	2.14	2.81	5	11

Formula: AQOL6D ~SOFAS_scaled + cdaysoor + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 70: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.33	0.14	0.17 , 0.5
RMSE	102.96	373.42	0.293 , 29.925

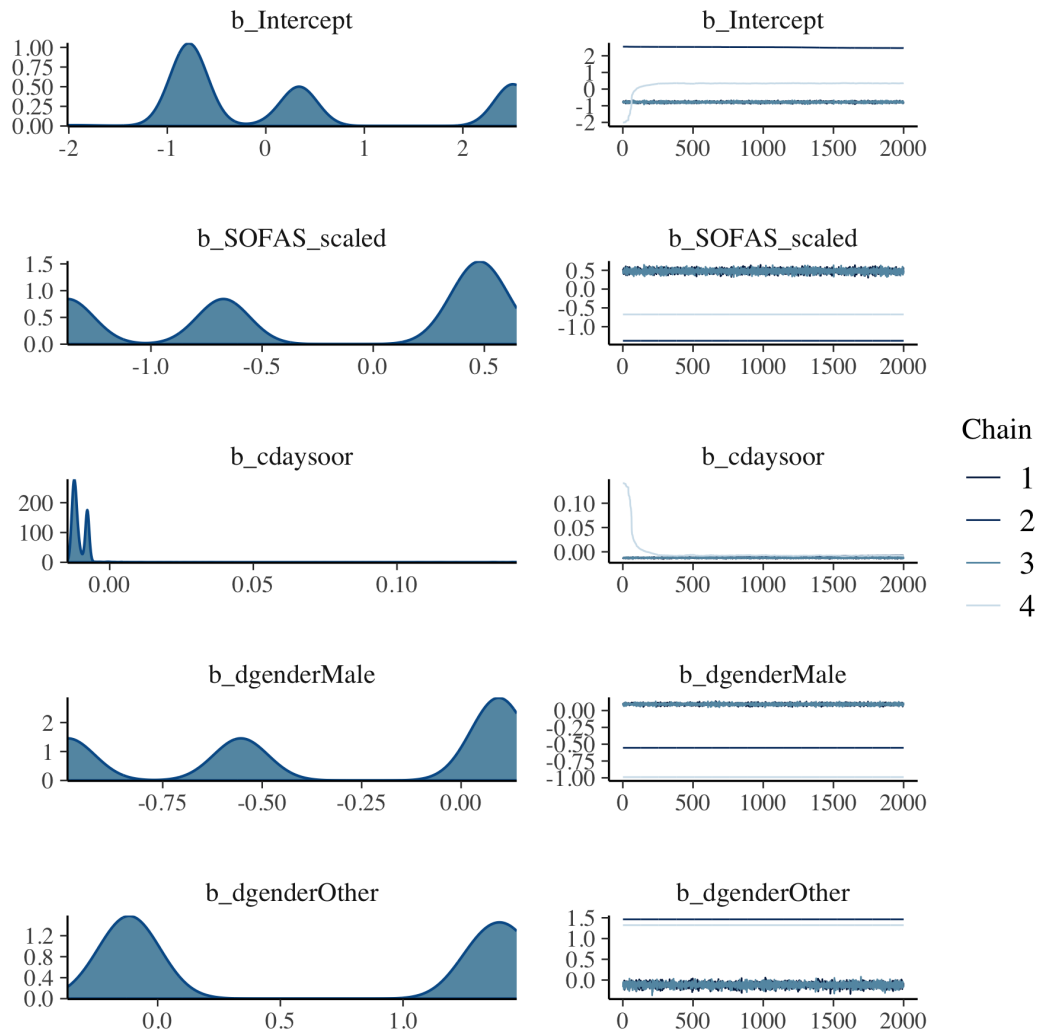


Figure 329: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link population level effects

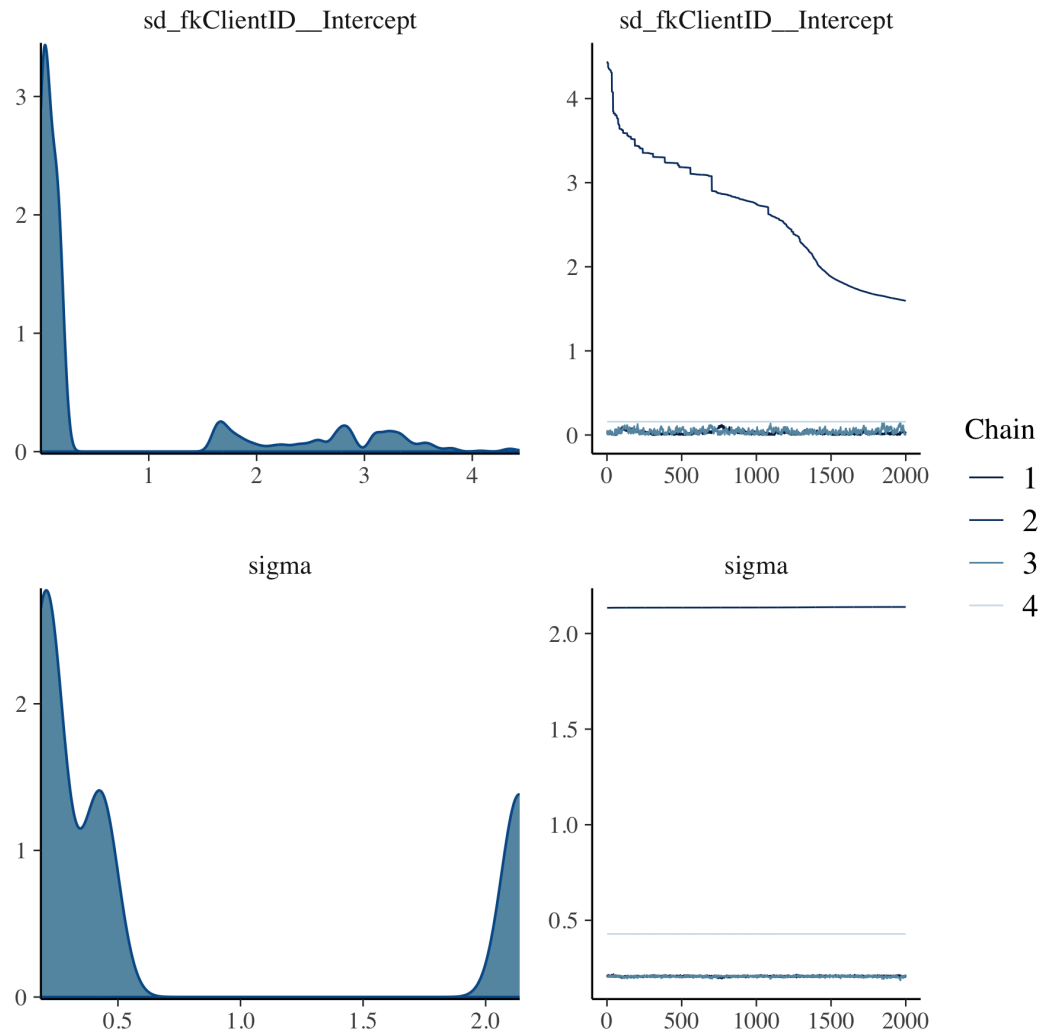


Figure 330: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link group level effects

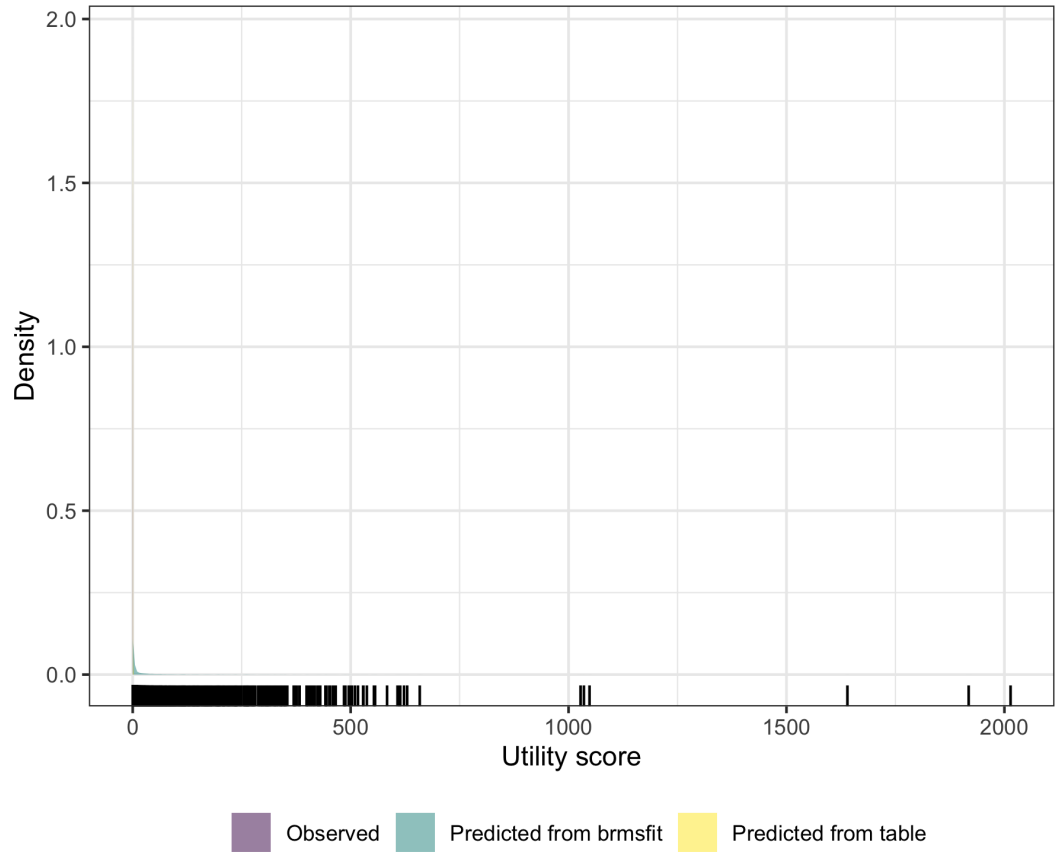


Figure 331: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

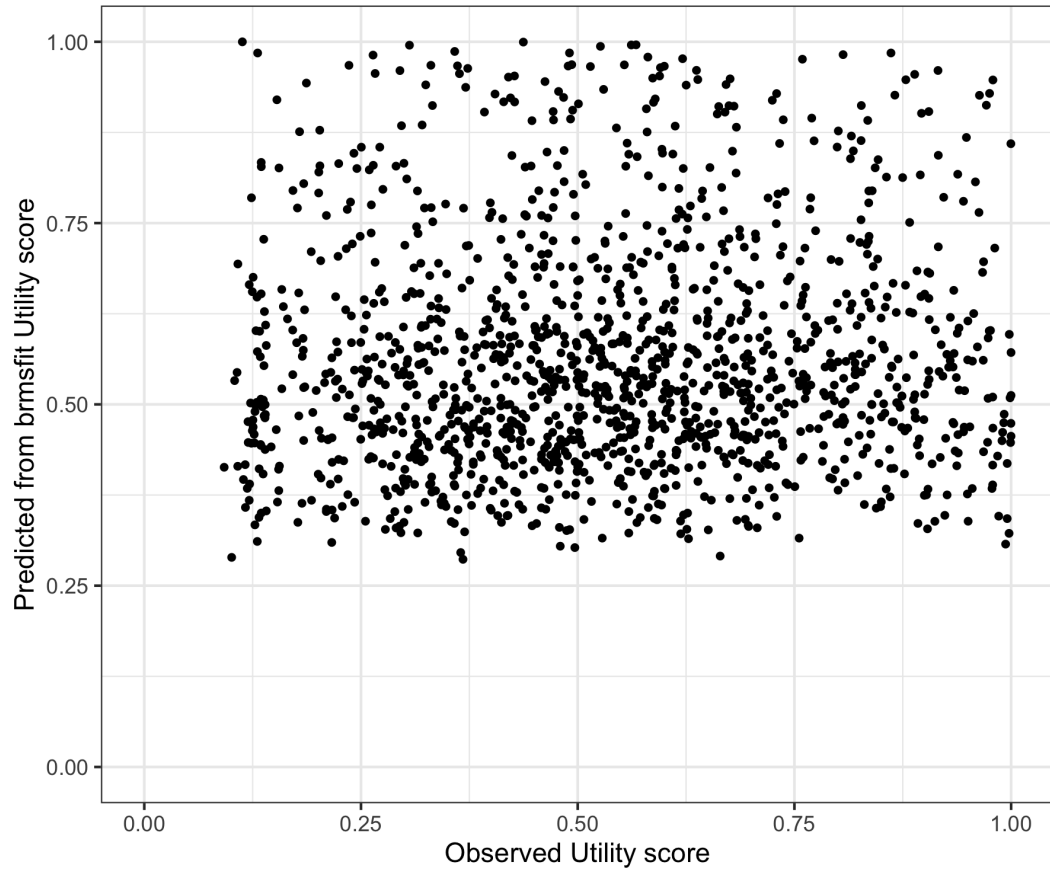


Figure 332: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

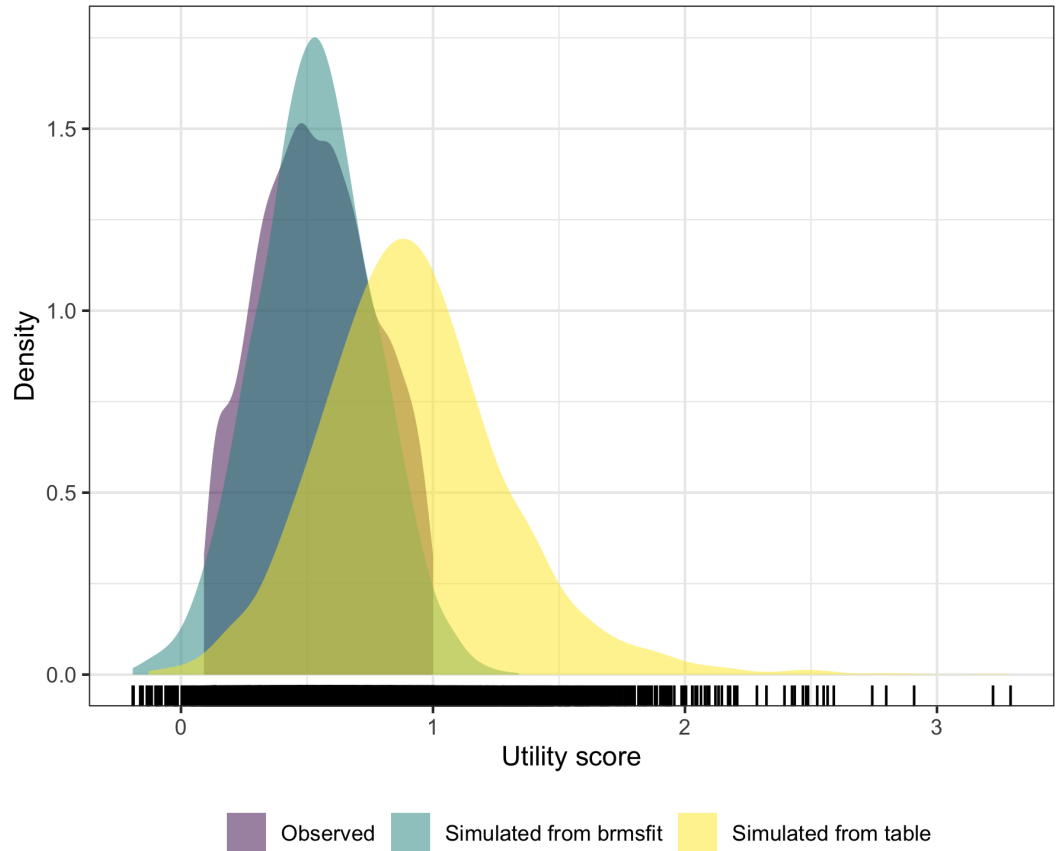


Figure 333: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

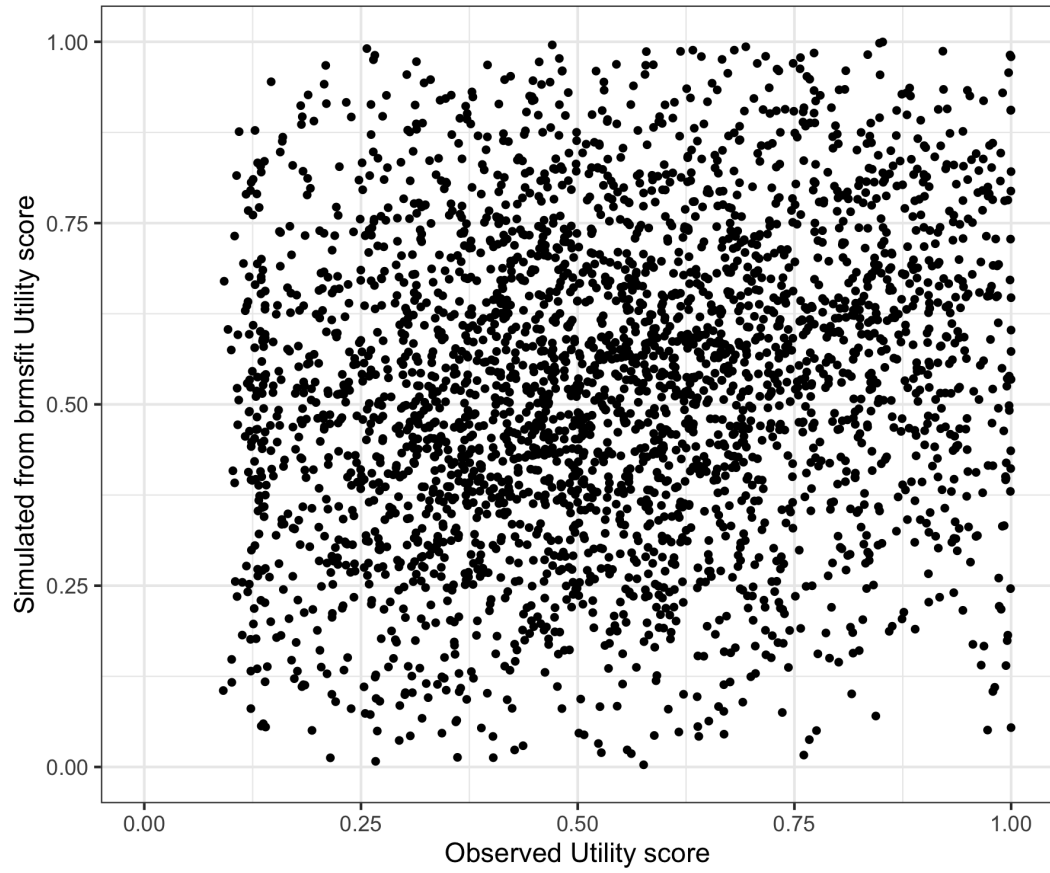


Figure 334: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

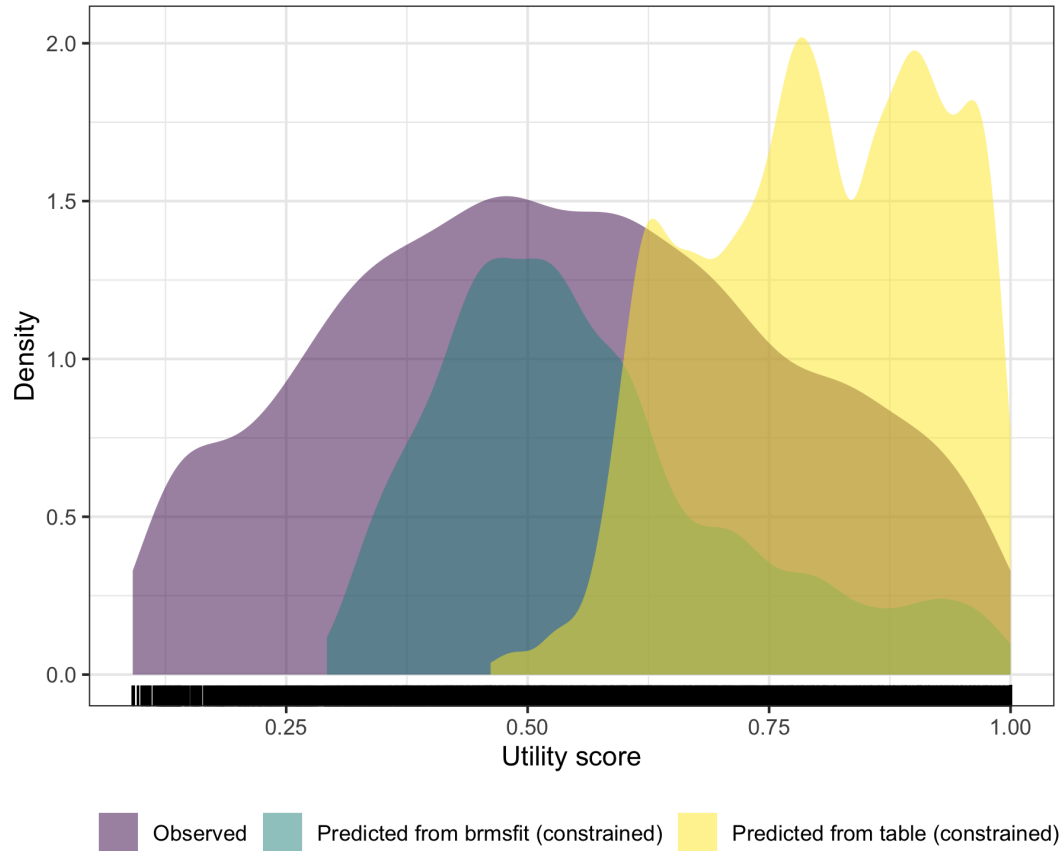


Figure 335: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

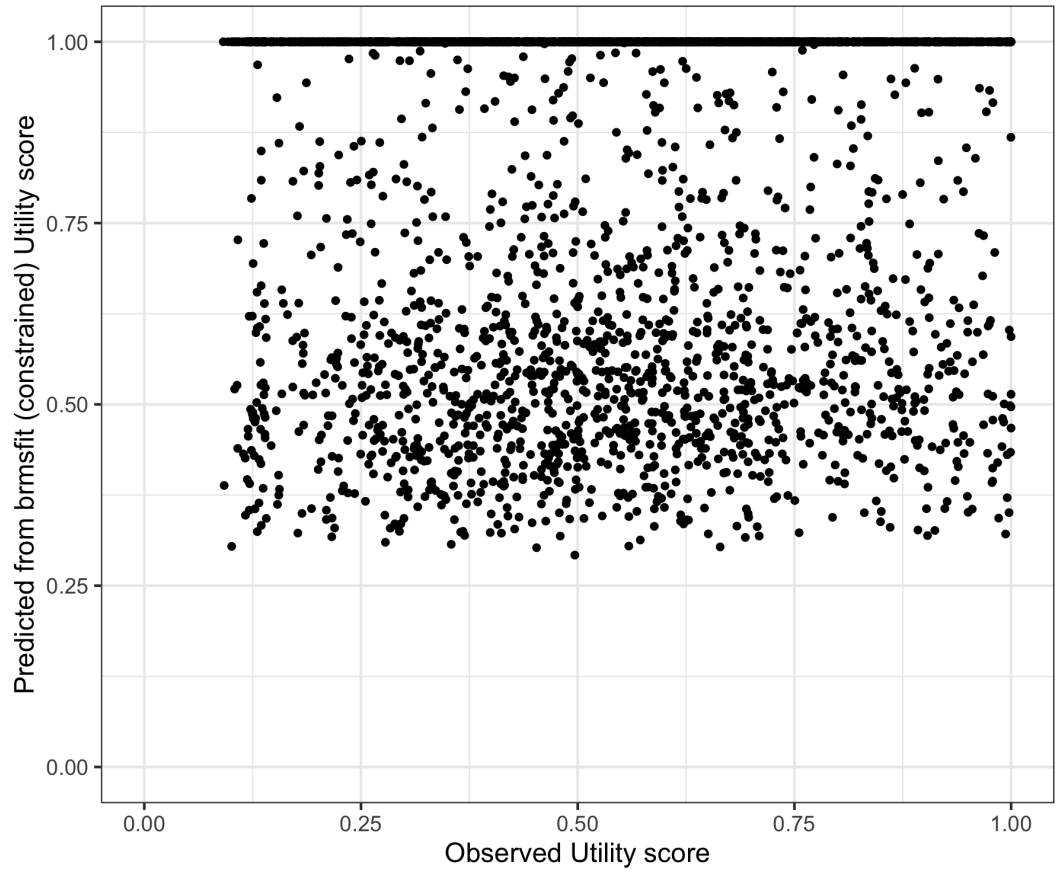


Figure 336: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

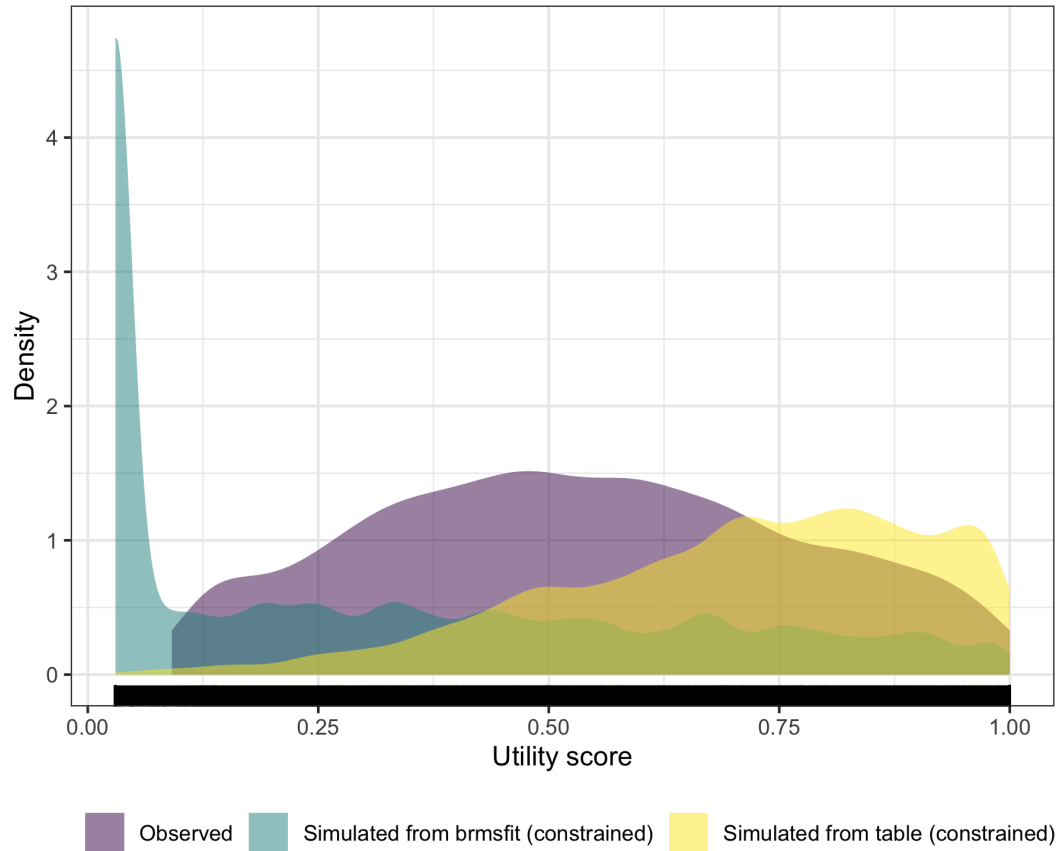


Figure 337: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

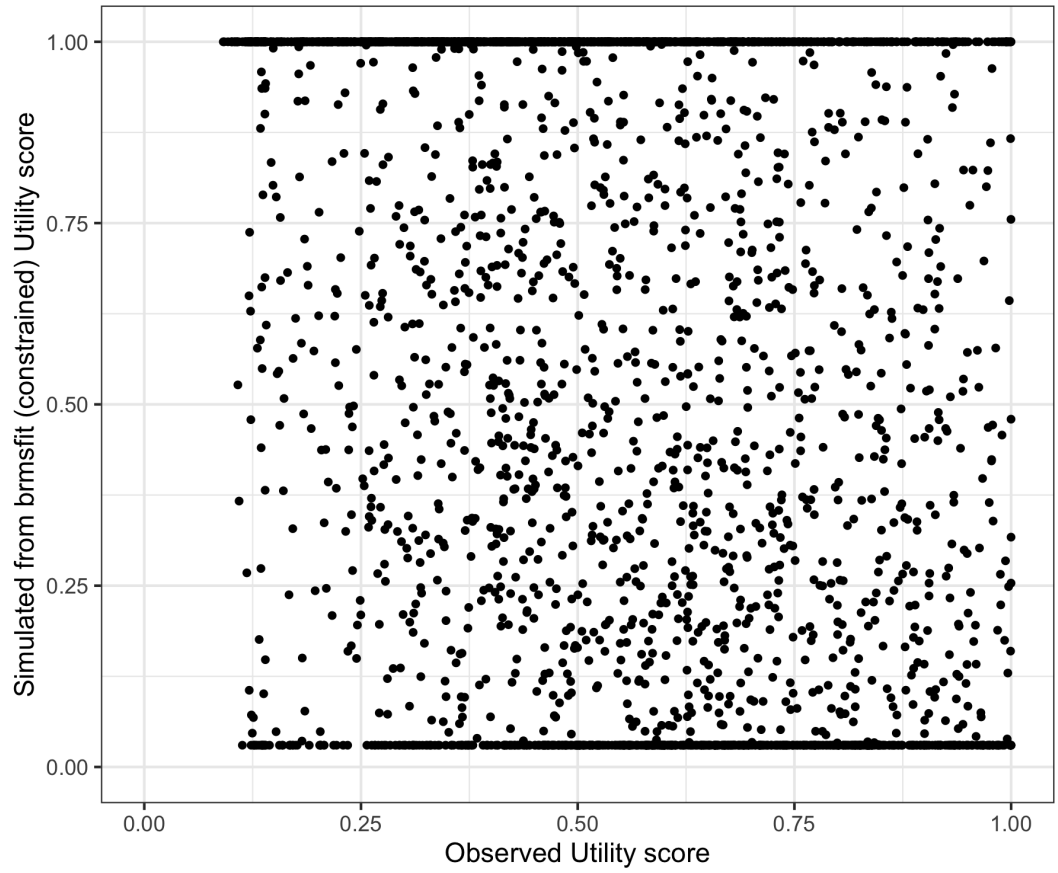


Figure 338: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

36 SOFAS with cdaysoor linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - cdaysoor (days out of role); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is SOFAS_cdaysoor_3_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 71: SOFAS with cdaysoor linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3294)							
sd(Intercept)	0.43	0.26	0.01	0.72	1.96	6	29
Population-Level Effects:							
Intercept	-0.52	0.06	-0.64	-0.40	1.01	775	1 787
SOFAS_scaled	0.76	0.09	0.59	0.93	1.01	566	1 055
cdaysoor	-0.02	0.00	-0.02	-0.02	1.00	1 319	1 493
dgenderMale	0.19	0.03	0.14	0.24	1.00	1 465	3 014
dgenderOther	-0.20	0.09	-0.37	-0.02	1.00	1 110	1 859
Family Specific Parameters:							
sigma	0.46	0.25	0.10	0.73	2.00	5	30

Formula: AQOL6D_CLL ~SOFAS_scaled + cdaysoor + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 72: SOFAS with cdaysoor linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.56	0.34	0.156 , 0.984
RMSE	1.08	0.06	1.016 , 1.137

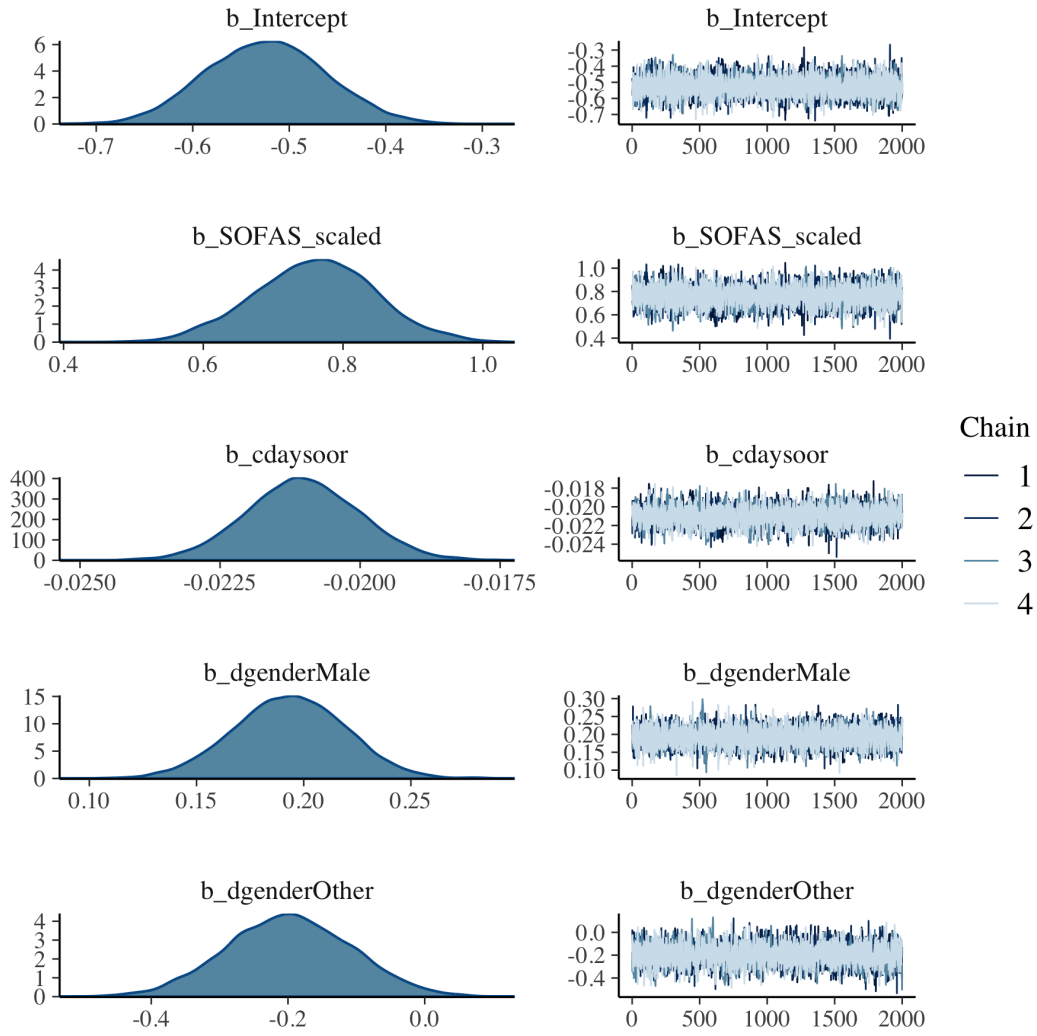


Figure 339: SOFAS with cdaysoor linear mixed model with complementary log log transformation population level effects

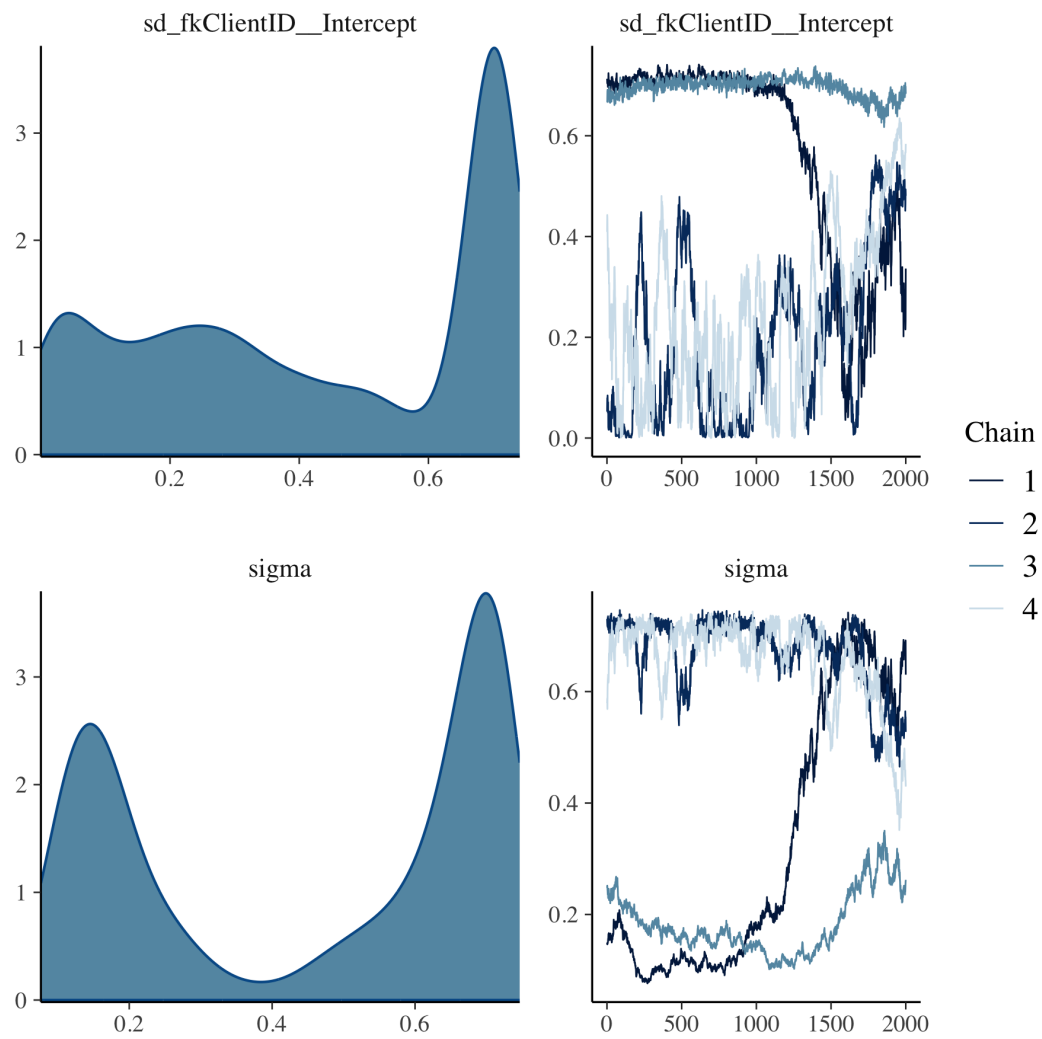


Figure 340: SOFAS with cdaysoor linear mixed model with complementary log log transformation group level effects

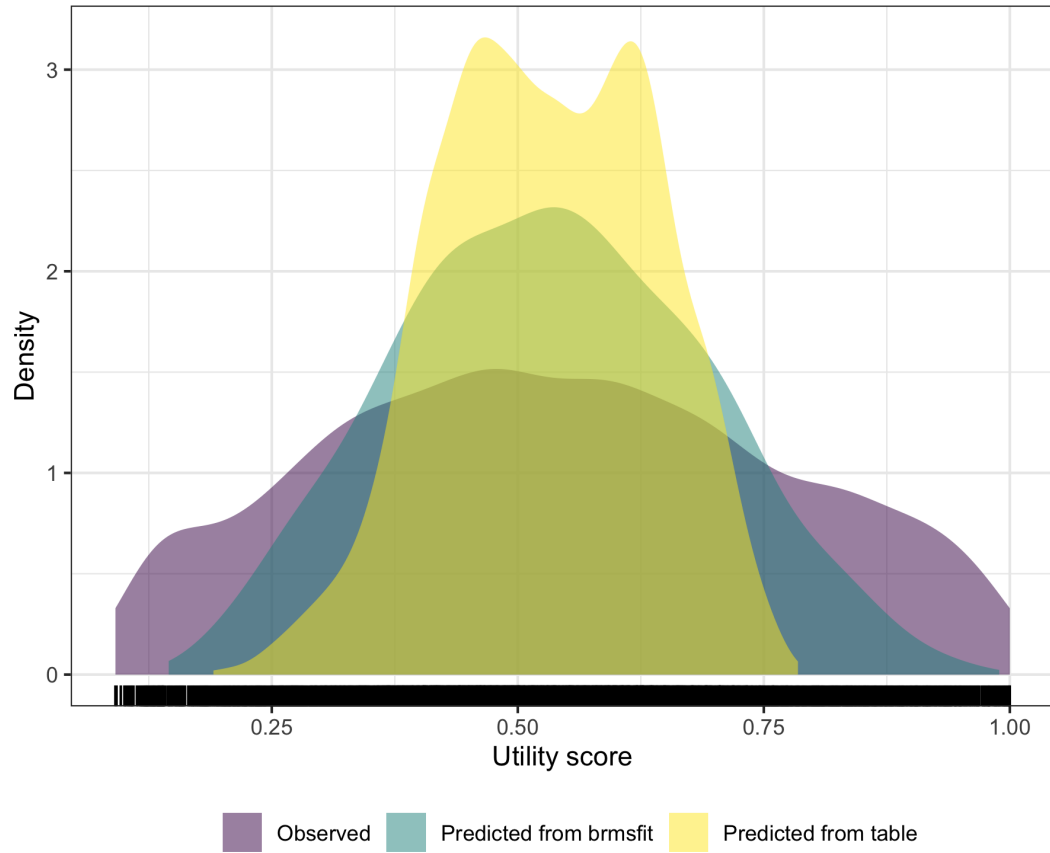


Figure 341: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

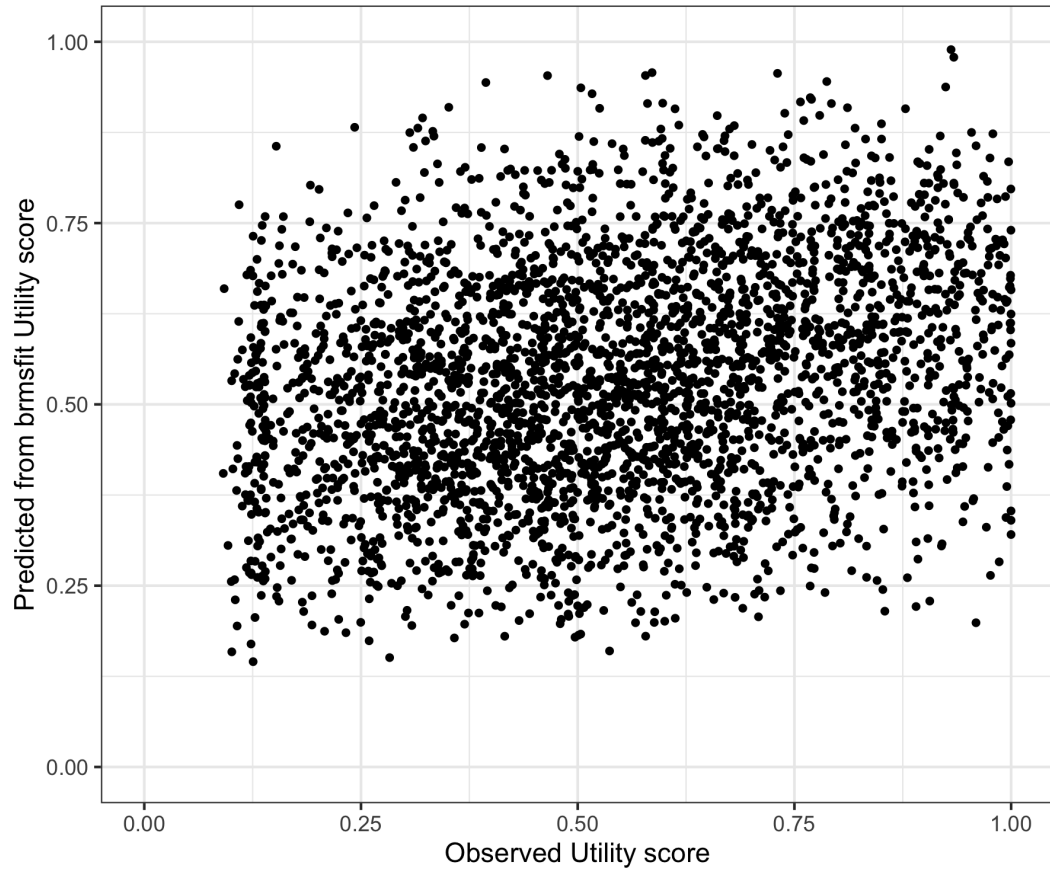


Figure 342: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

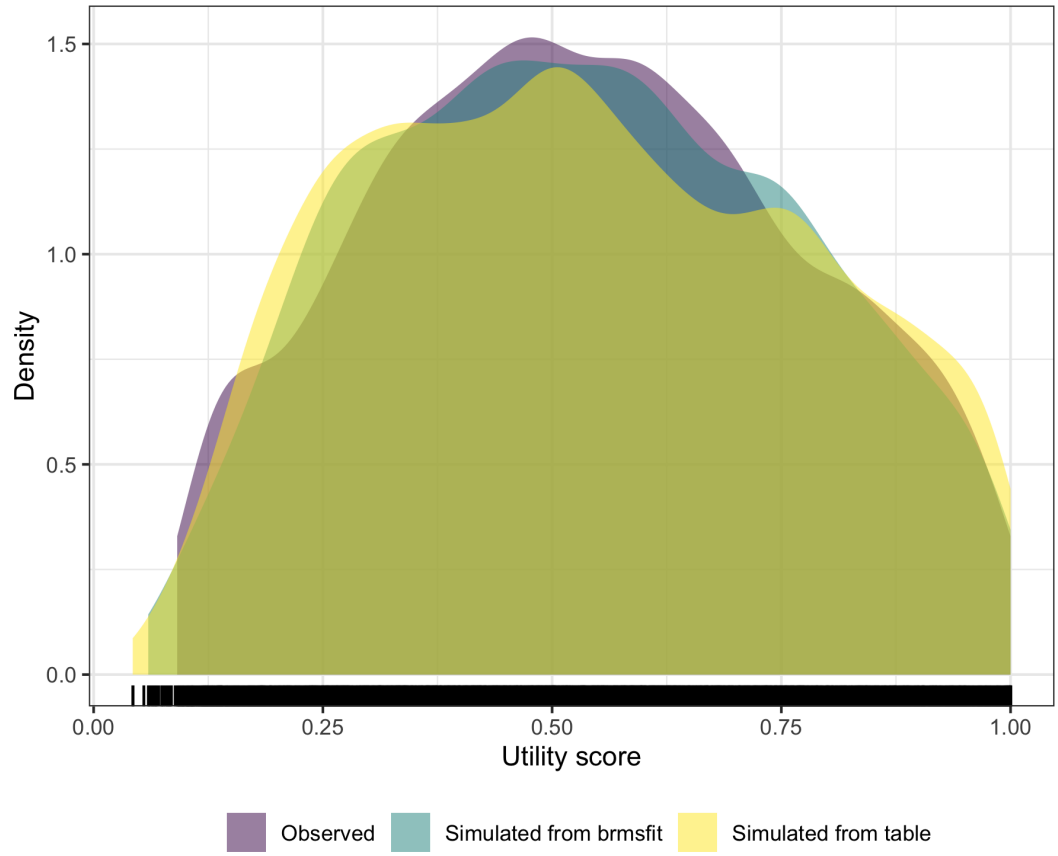


Figure 343: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

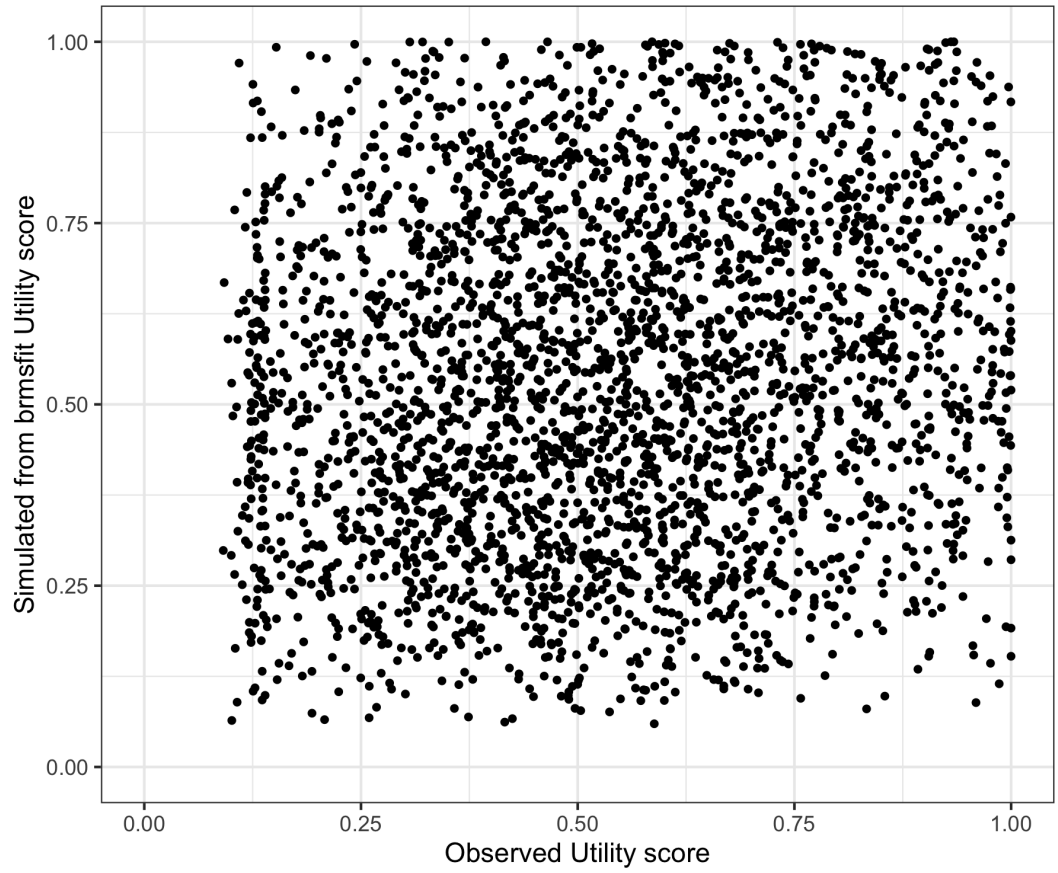


Figure 344: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

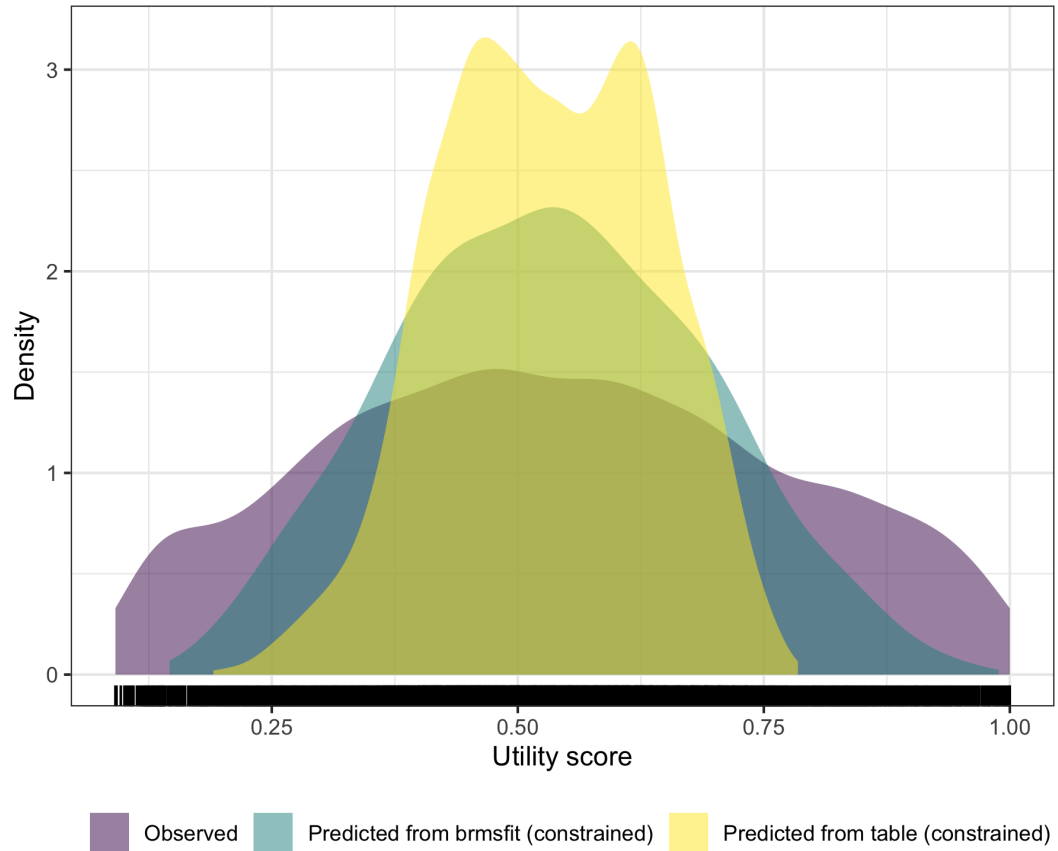


Figure 345: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

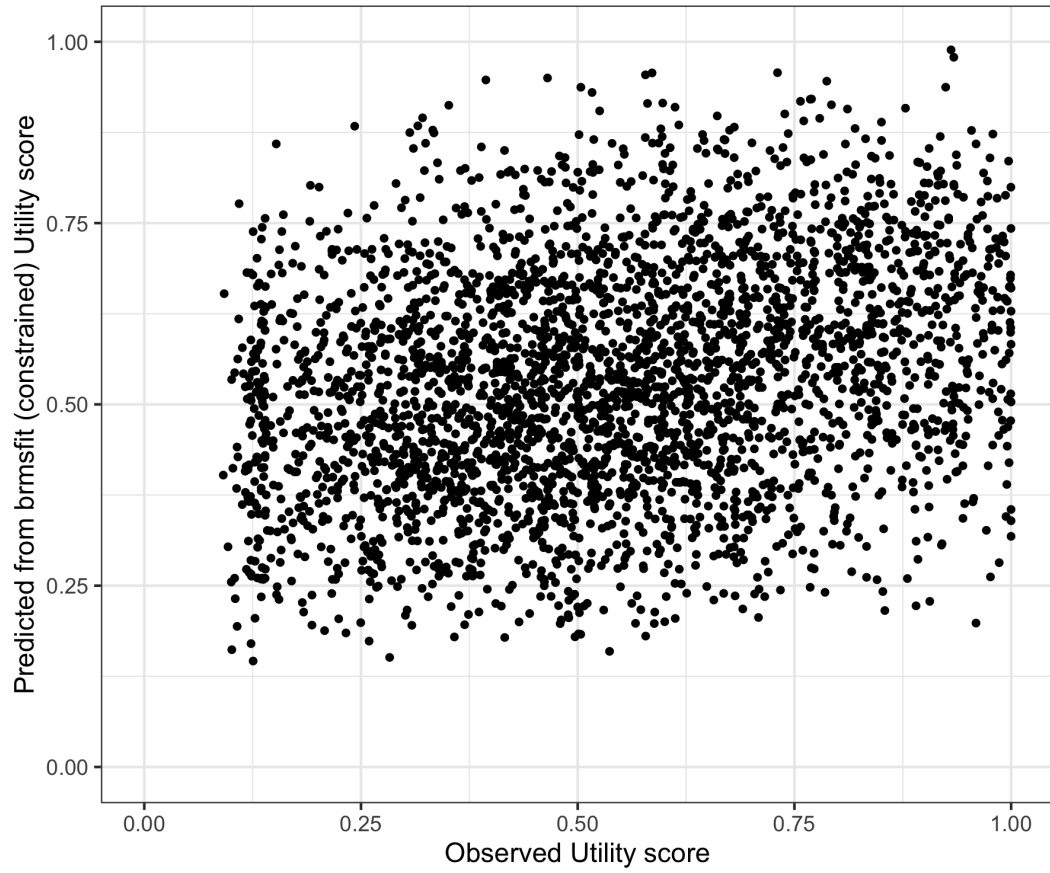


Figure 346: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

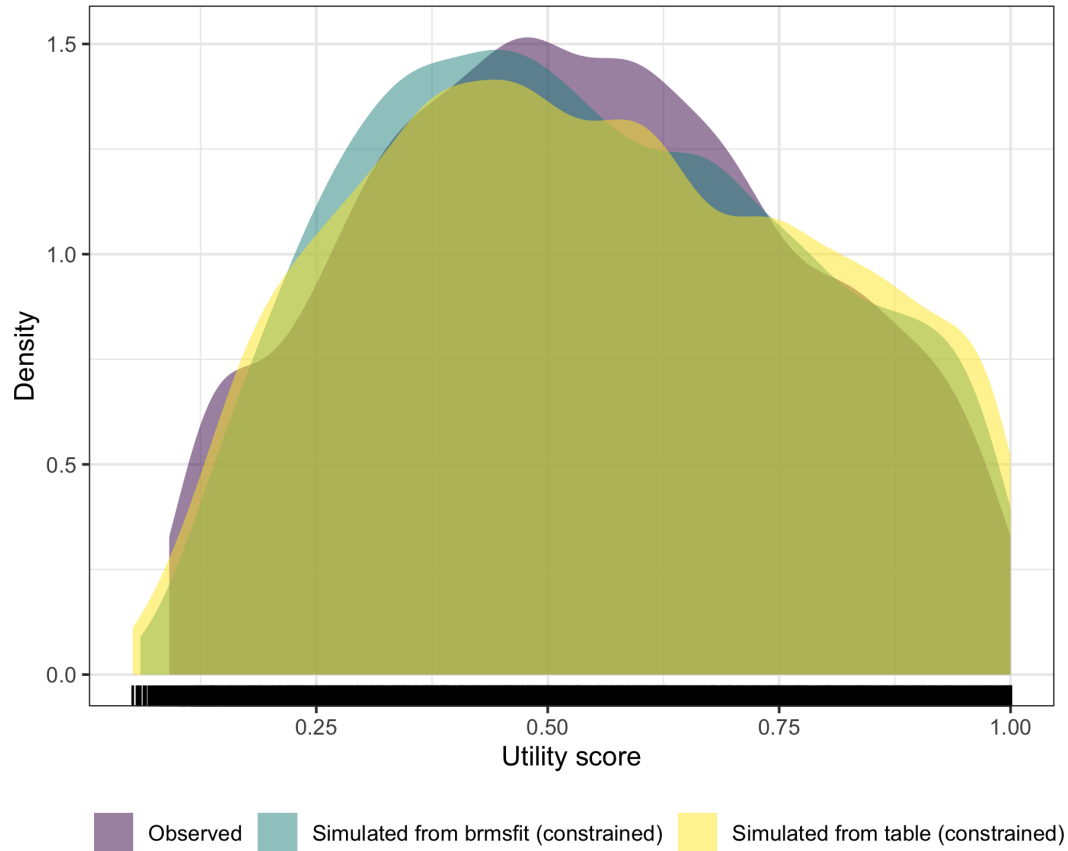


Figure 347: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

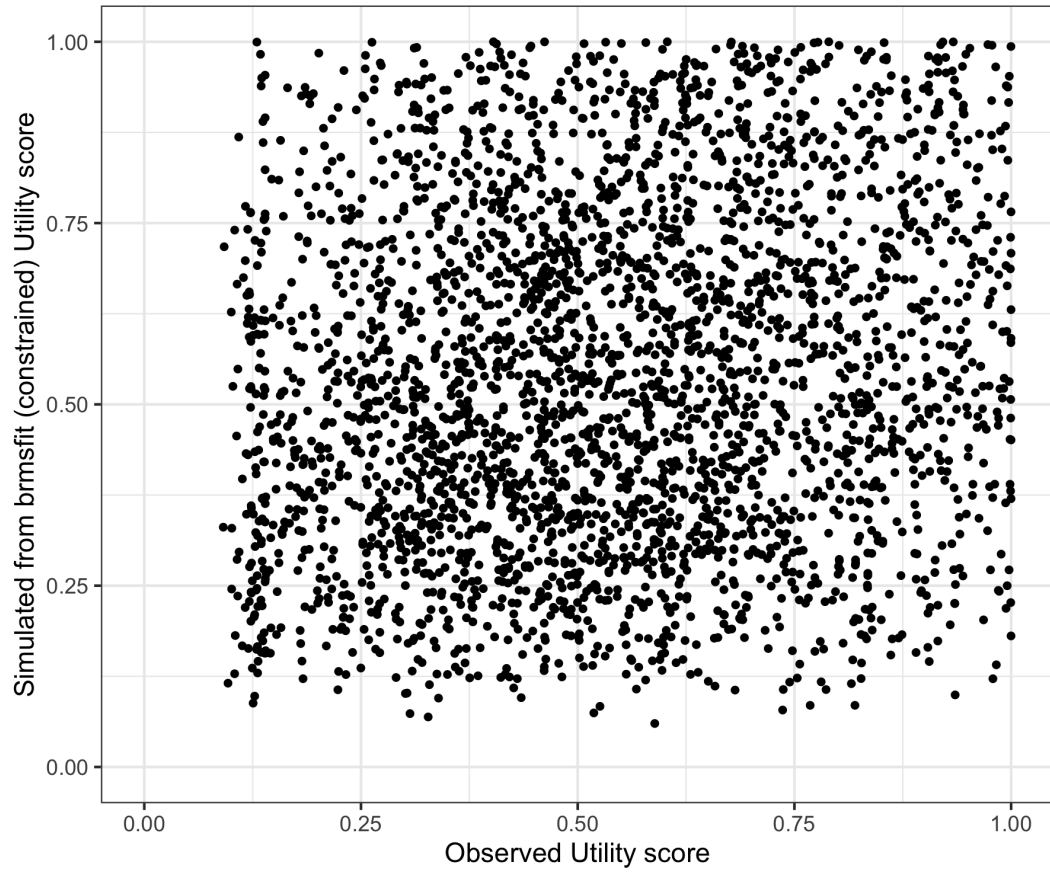


Figure 348: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

37 SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - cdaysoor (days out of role); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is SOFAS_cdaysoor_4_GLM_GSN_LOG.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Table 73: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3212)							
sd(Intercept)	0.86	1.43	0.00	3.33	1.88	6	30
Population-Level Effects:							
Intercept	-0.94	0.38	-1.96	-0.64	1.62	7	11
SOFAS_scaled	0.19	0.52	-0.67	0.59	1.47	8	4
cdaysoor	0.00	0.03	-0.01	0.09	1.60	7	11
dstudyingworkingBoth	-0.24	0.44	-0.99	0.06	1.56	7	4
dstudyingworkingStudy	0.36	0.56	0.00	1.32	1.55	7	
dstudyingworkingWork	-0.15	0.22	-0.53	0.02	1.55	7	4
Family Specific Parameters:							
sigma	0.20	0.02	0.16	0.22	1.71	6	11

Formula: AQOL6D ~SOFAS_scaled + cdaysoor + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 74: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.26	0.14	0.157 , 0.5
RMSE	90.57	329.43	0.293 , 38.523

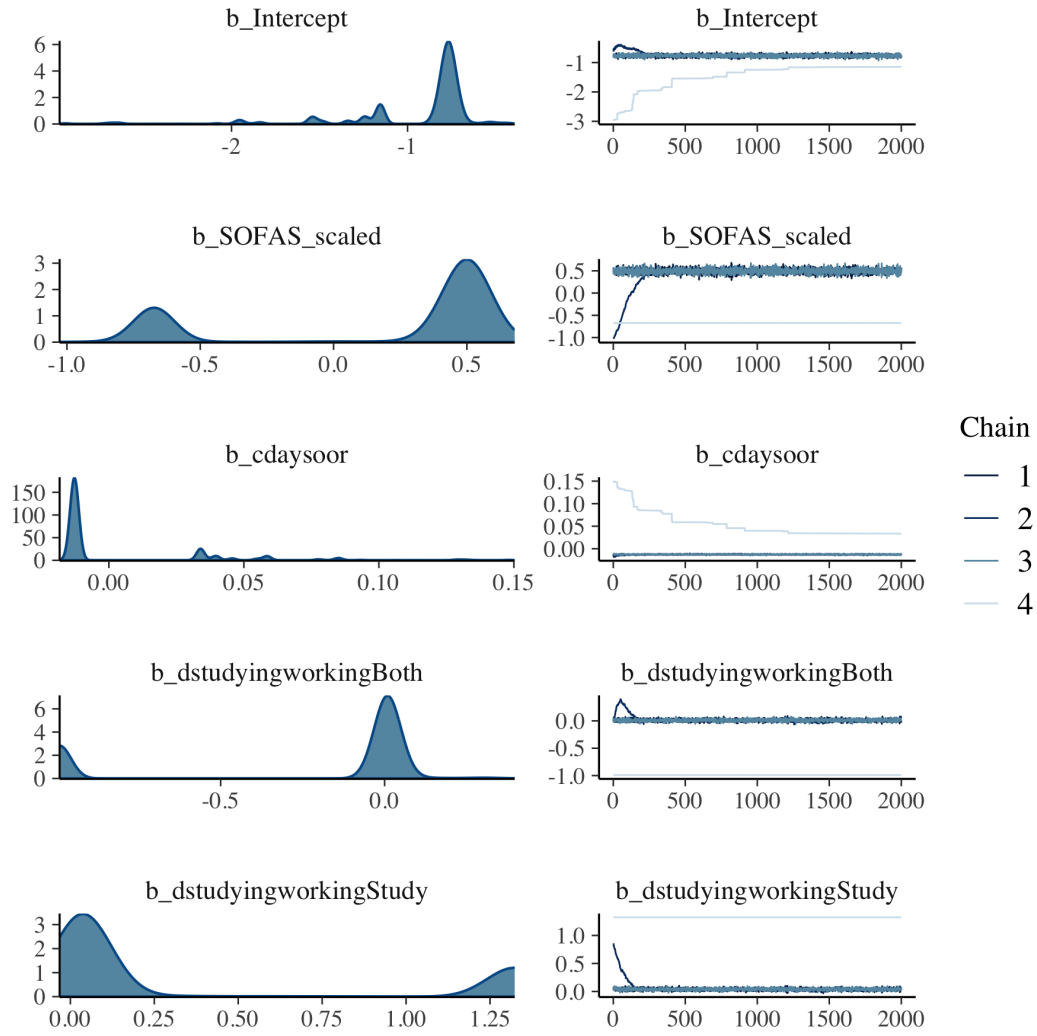


Figure 349: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link population level effects

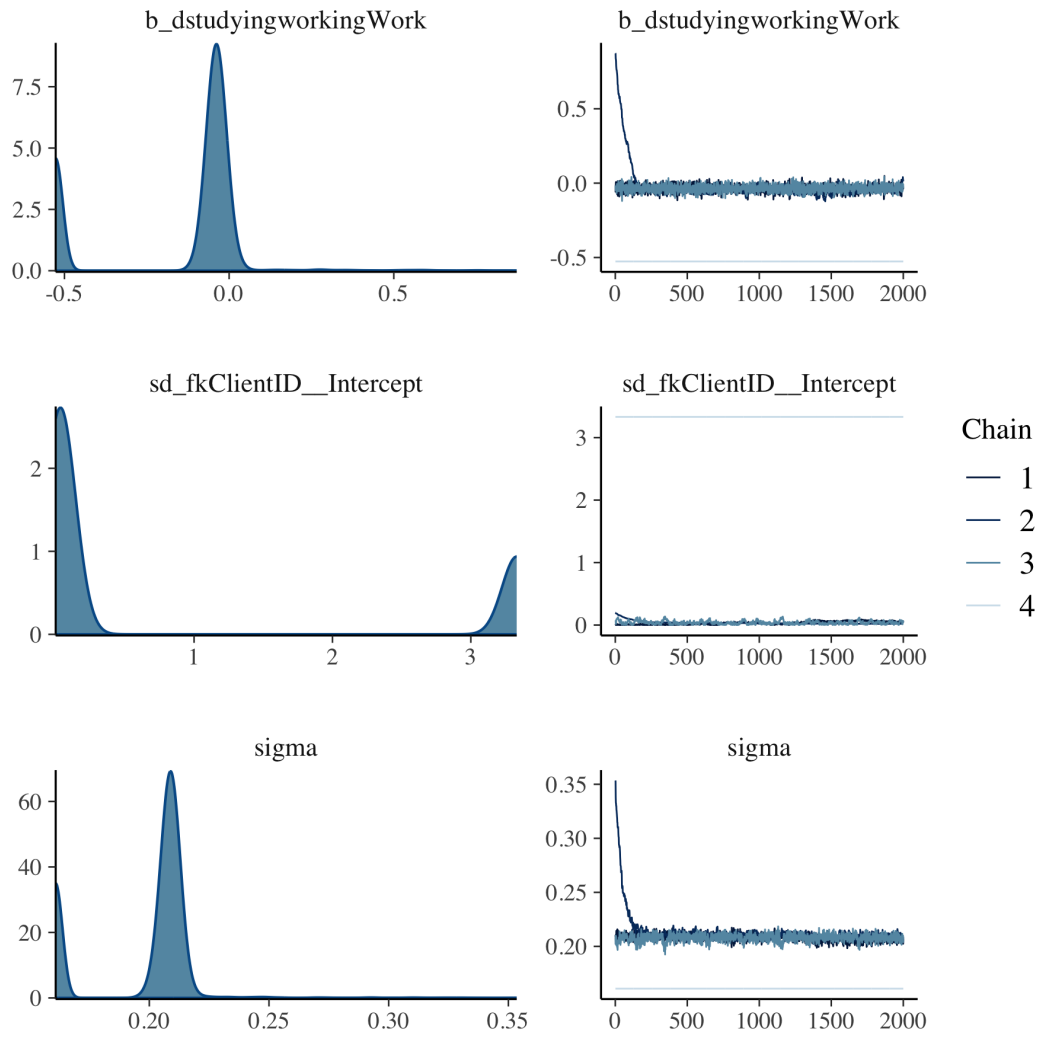


Figure 350: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link group level effects

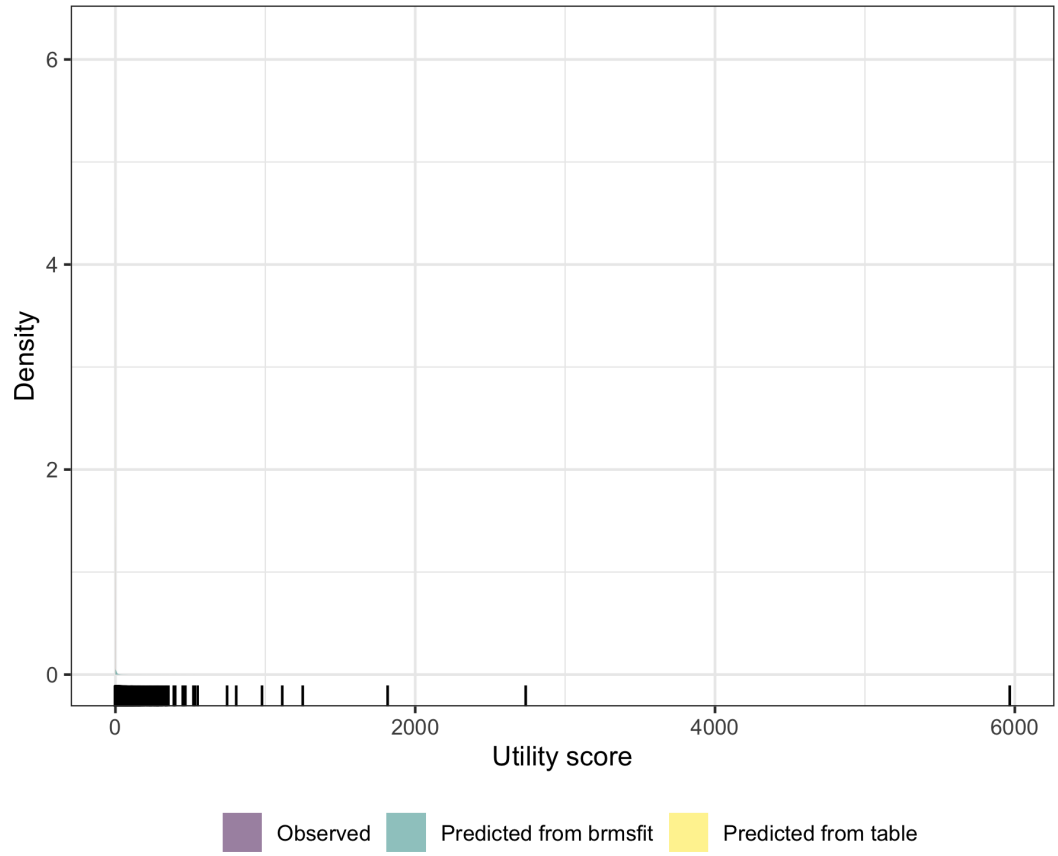


Figure 351: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

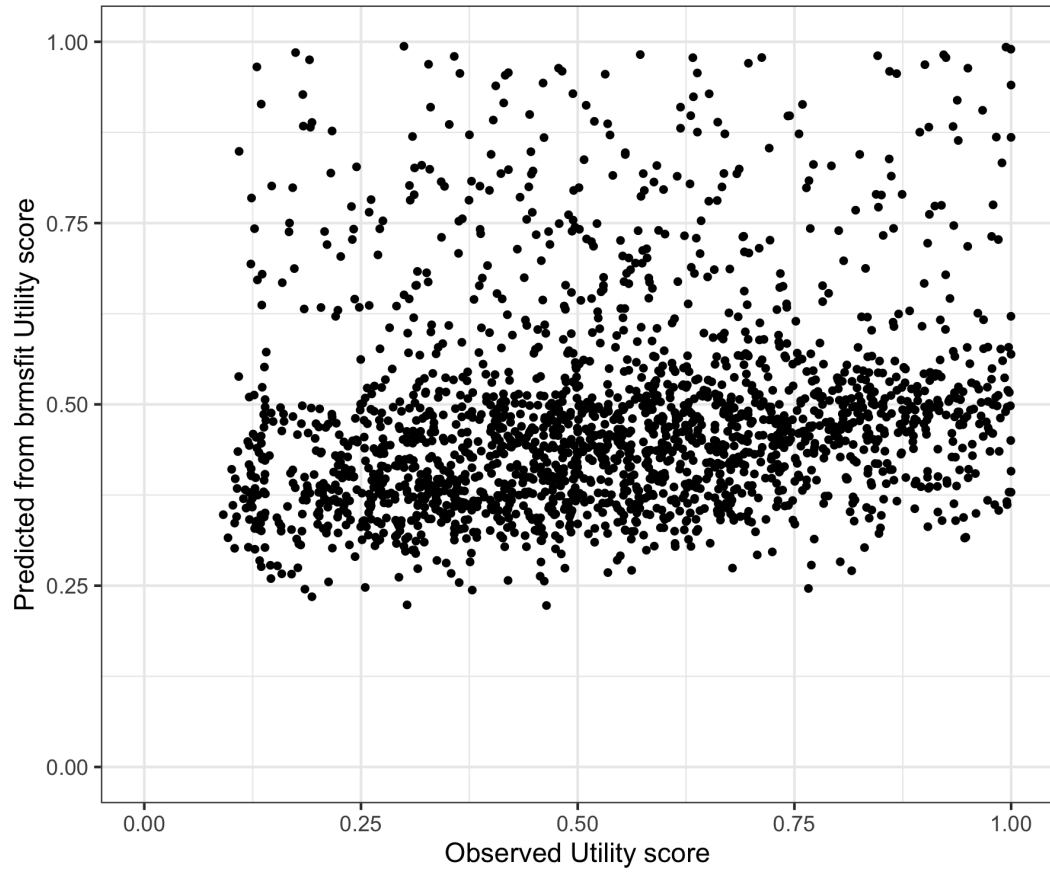


Figure 352: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

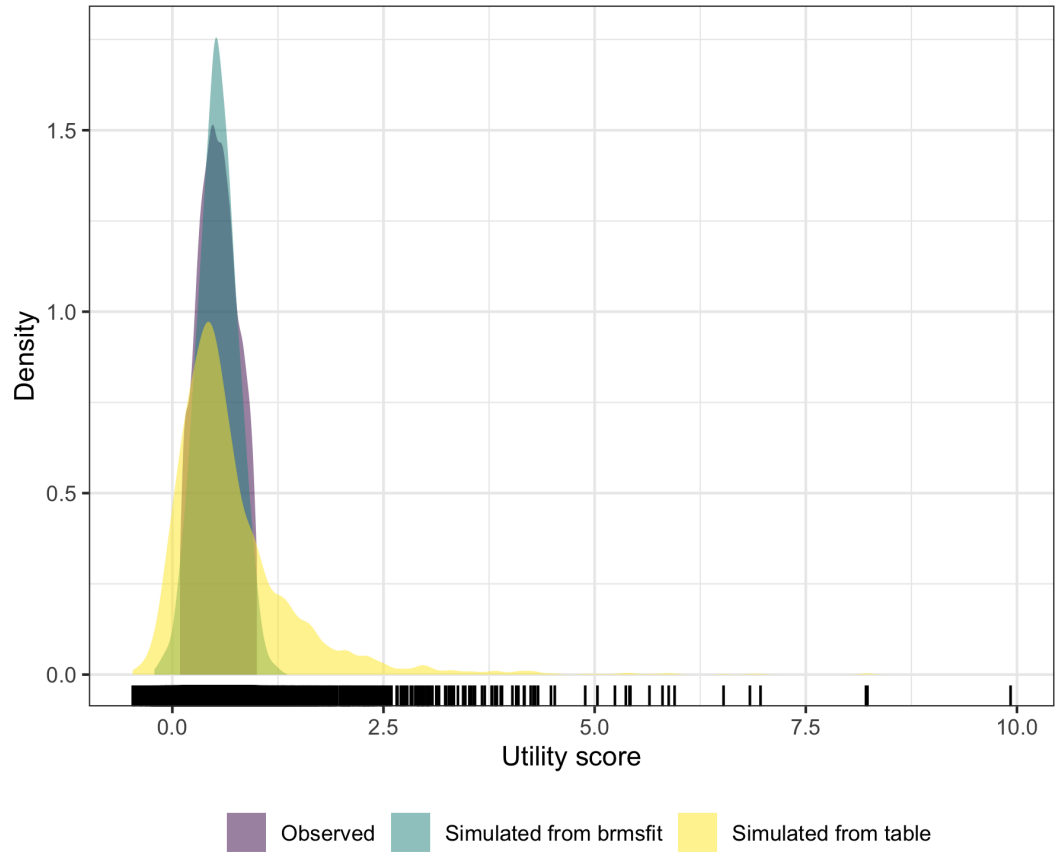


Figure 353: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

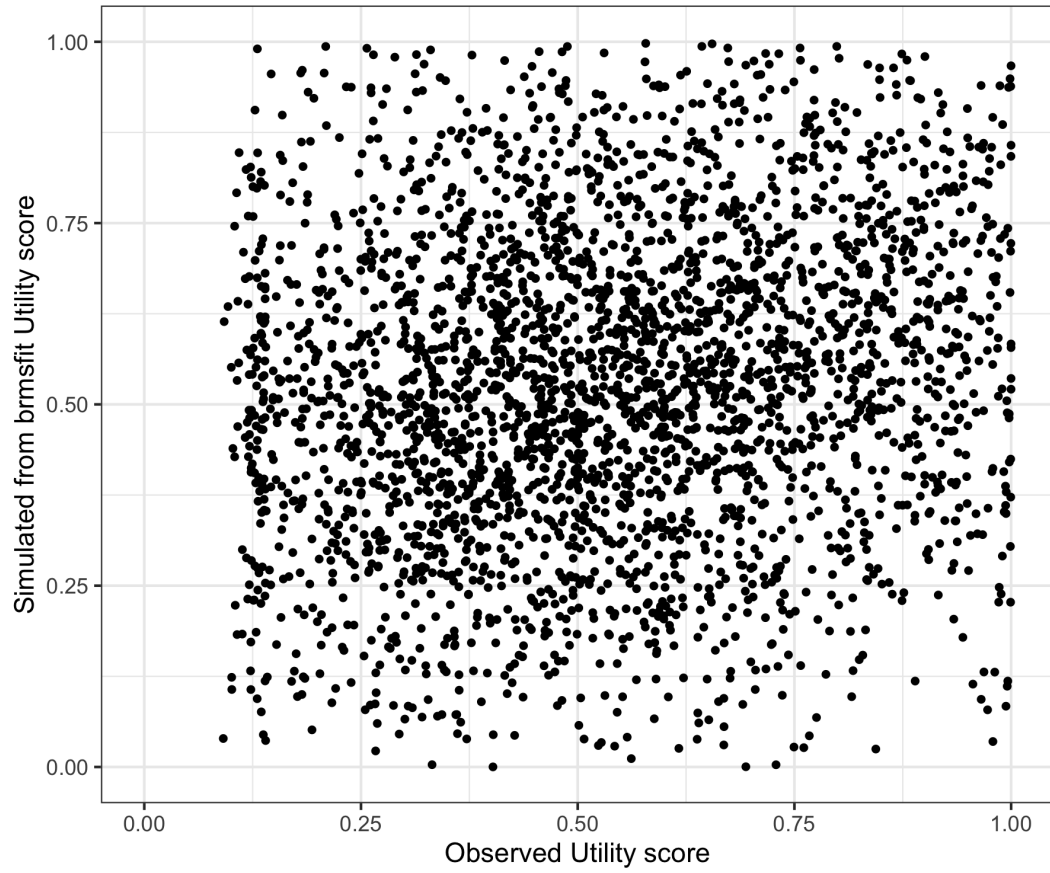


Figure 354: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

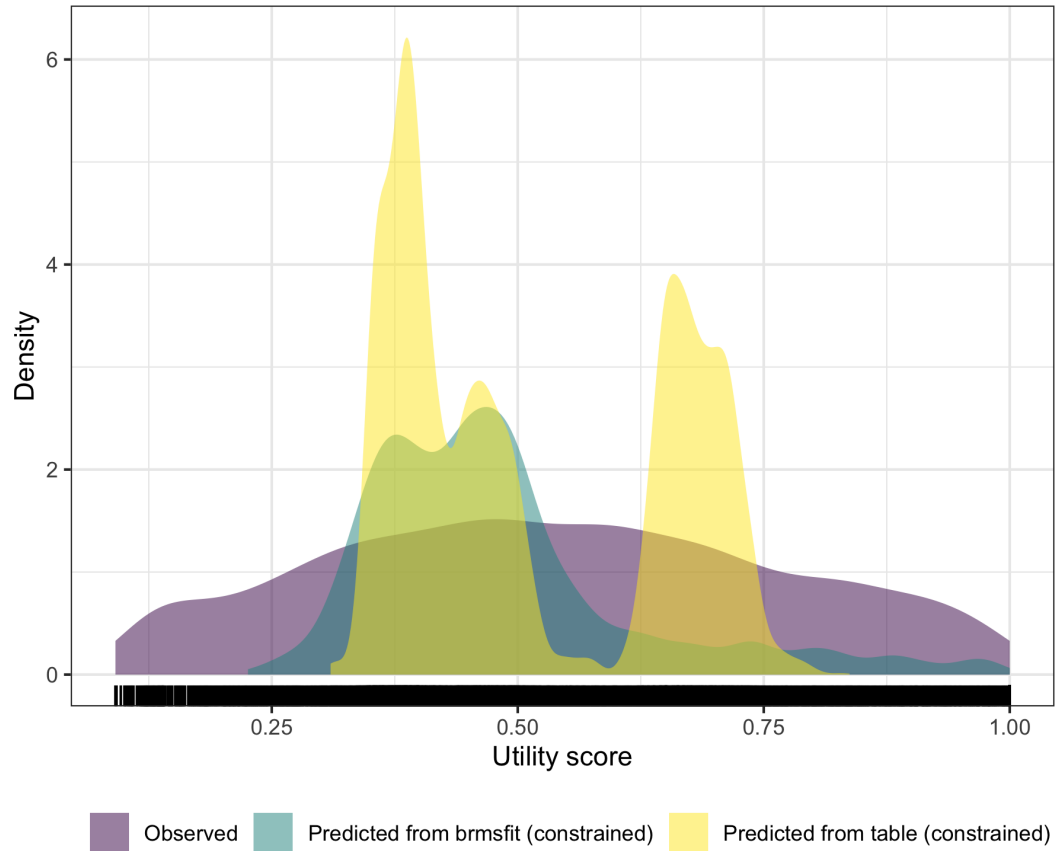


Figure 355: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

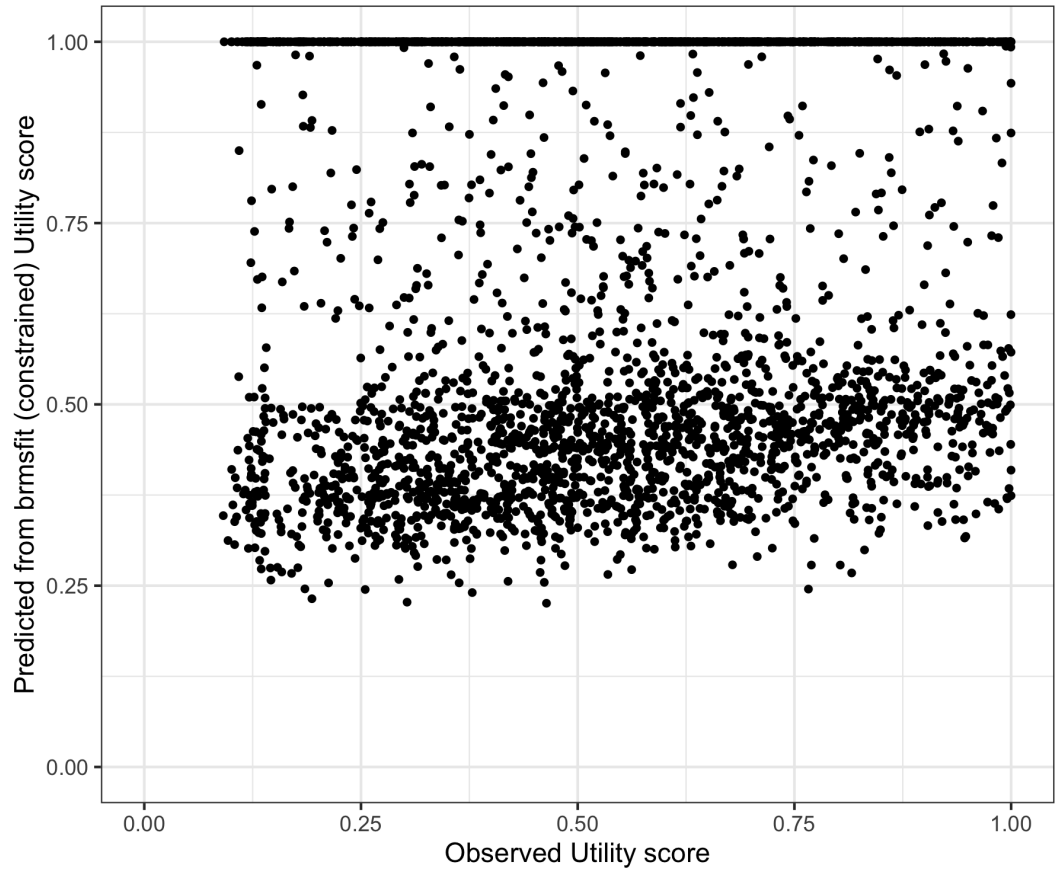


Figure 356: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

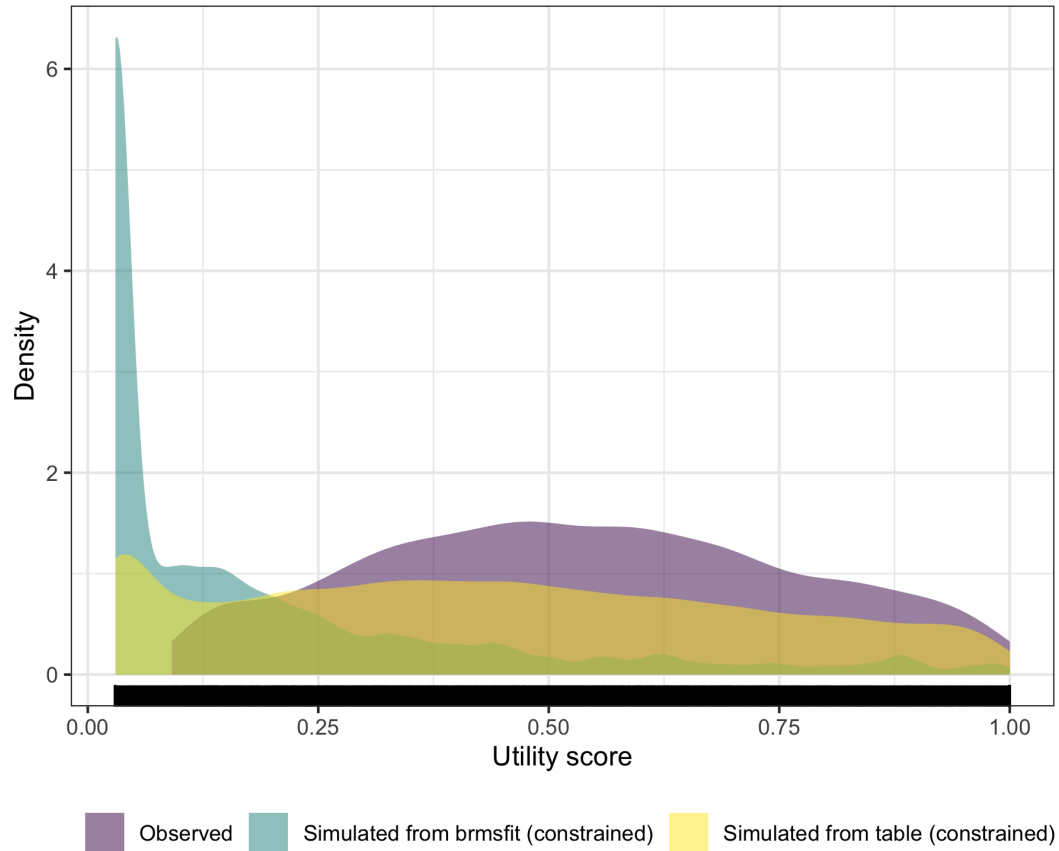


Figure 357: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

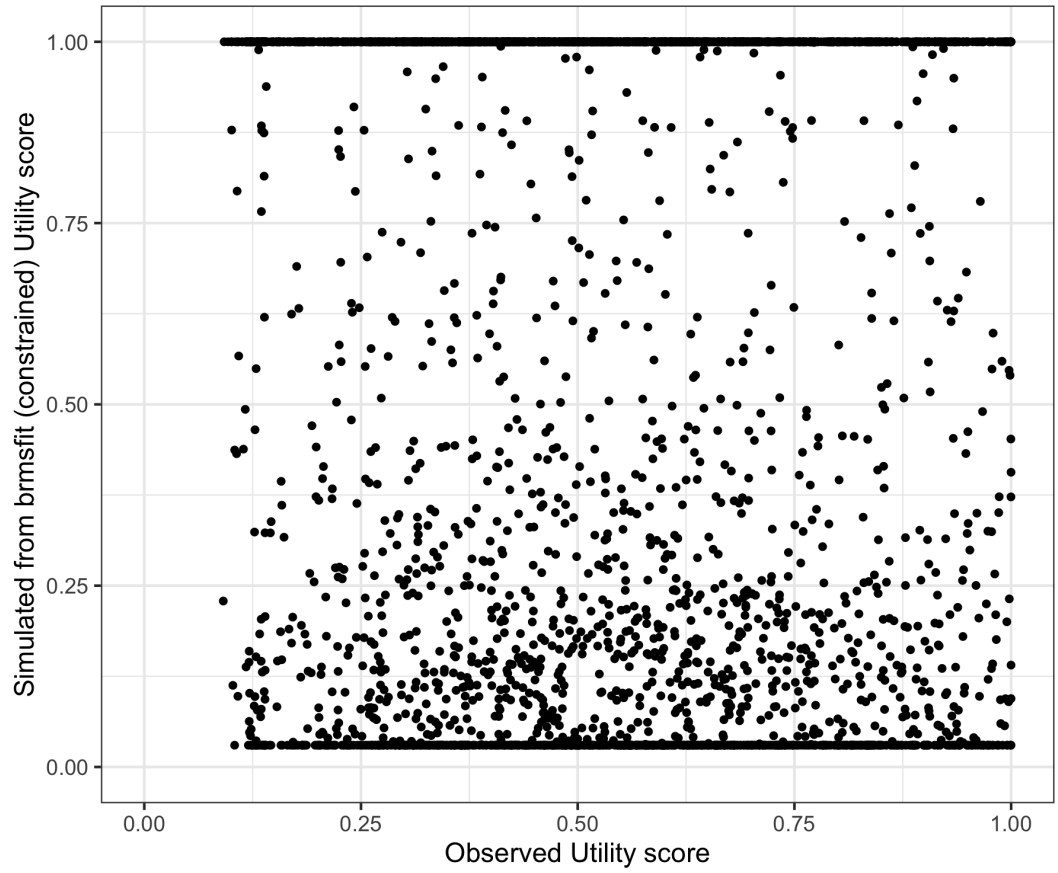


Figure 358: SOFAS with cdaysoor generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

38 SOFAS with cdaysoor linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - cdaysoor (days out of role); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is SOFAS_cdaysoor_4_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Table 75: SOFAS with cdaysoor linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3212)							
sd(Intercept)	0.51	0.18	0.07	0.72	1.68	6	17
Population-Level Effects:							
Intercept	-0.49	0.07	-0.62	-0.36	1.00	2 157	3 502
SOFAS_scaled	0.77	0.09	0.60	0.94	1.00	2 338	3 230
cdaysoor	-0.02	0.00	-0.02	-0.02	1.00	2 155	3 245
dstudyingworkingBoth	0.04	0.04	-0.04	0.11	1.00	1 534	3 444
dstudyingworkingStudy	0.08	0.04	0.01	0.15	1.00	1 577	2 039
dstudyingworkingWork	-0.05	0.04	-0.14	0.03	1.00	1 264	1 705
Family Specific Parameters:							
sigma	0.46	0.17	0.14	0.73	1.69	6	16

Formula: AQOL6D_CLL ~SOFAS_scaled + cdaysoor + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 76: SOFAS with cdaysoor linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.62	0.24	0.16 , 0.969
RMSE	1.07	0.04	1.039 , 1.098

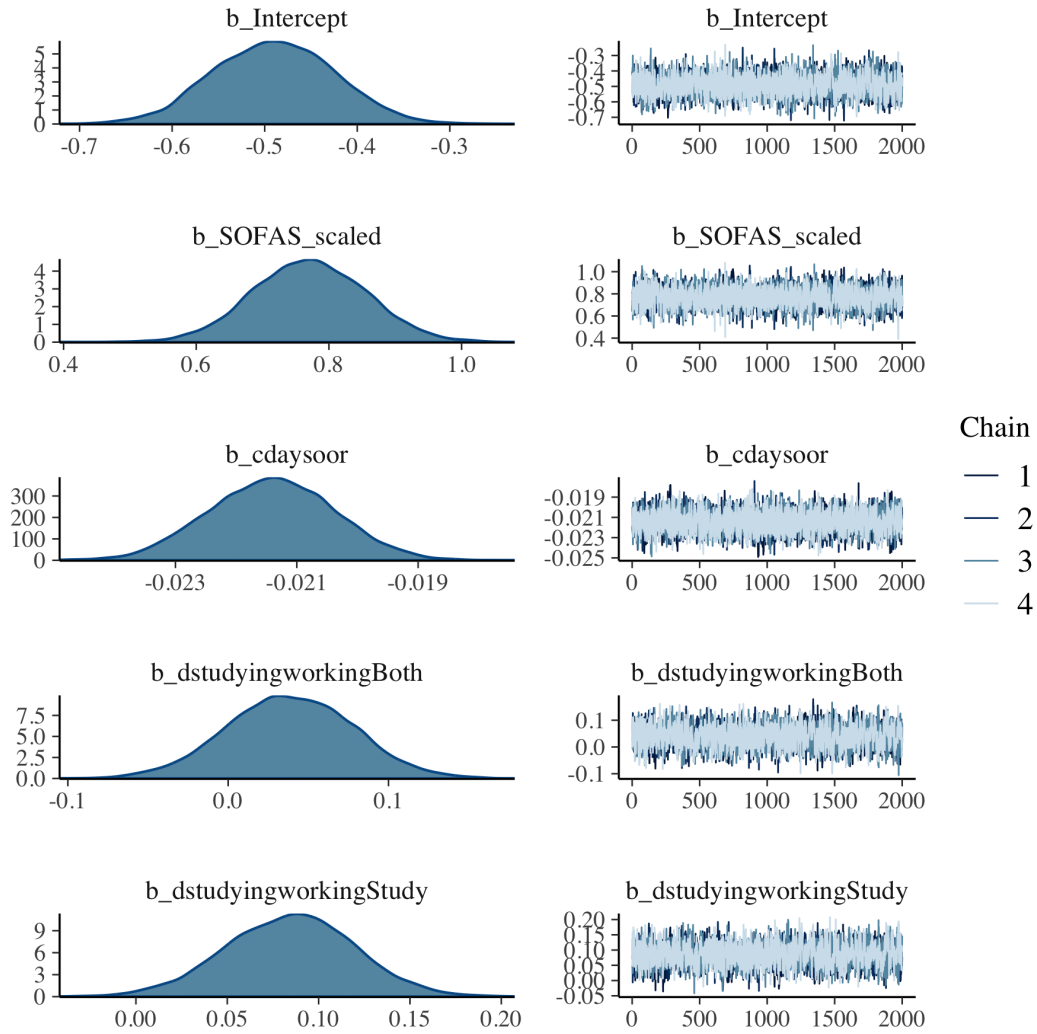


Figure 359: SOFAS with cdaysoor linear mixed model with complementary log log transformation population level effects

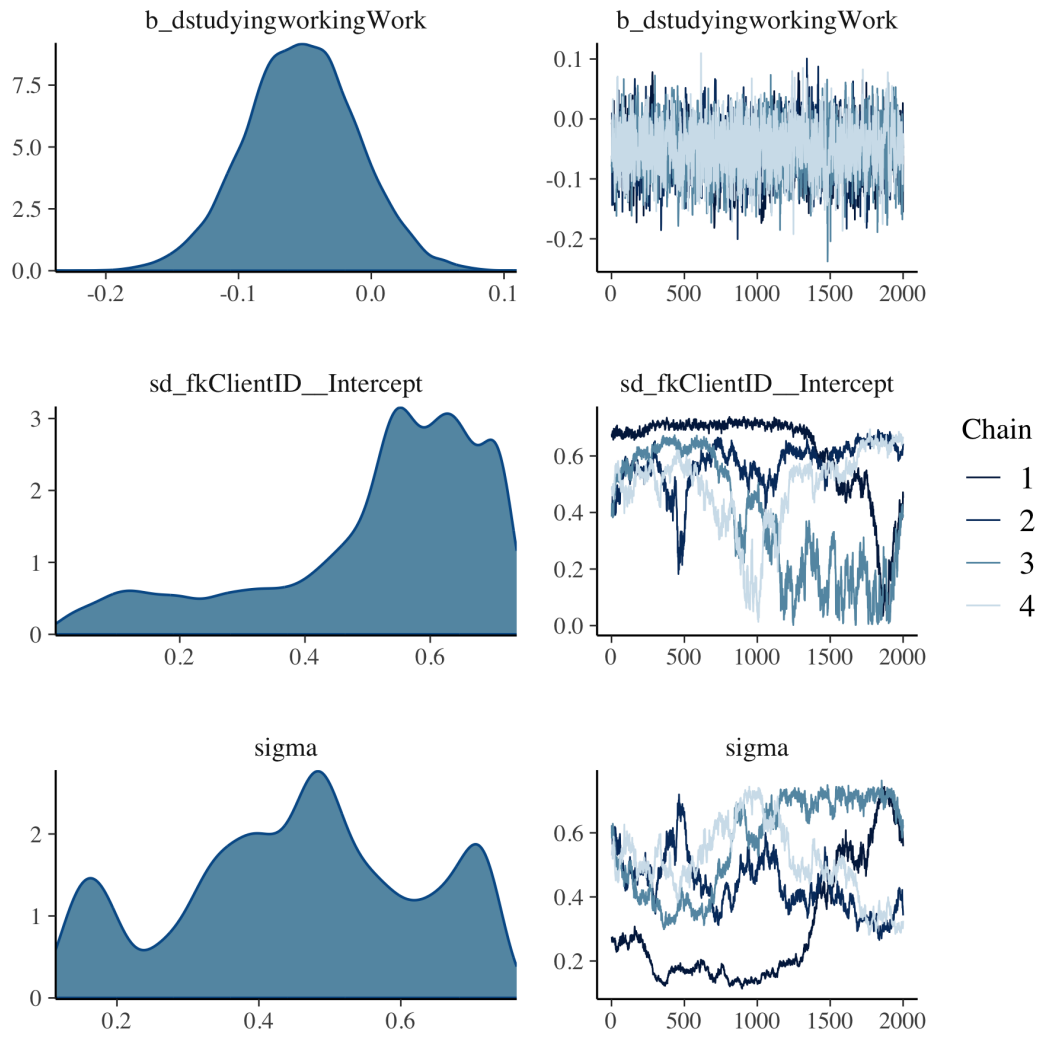


Figure 360: SOFAS with cdaysoor linear mixed model with complementary log log transformation group level effects

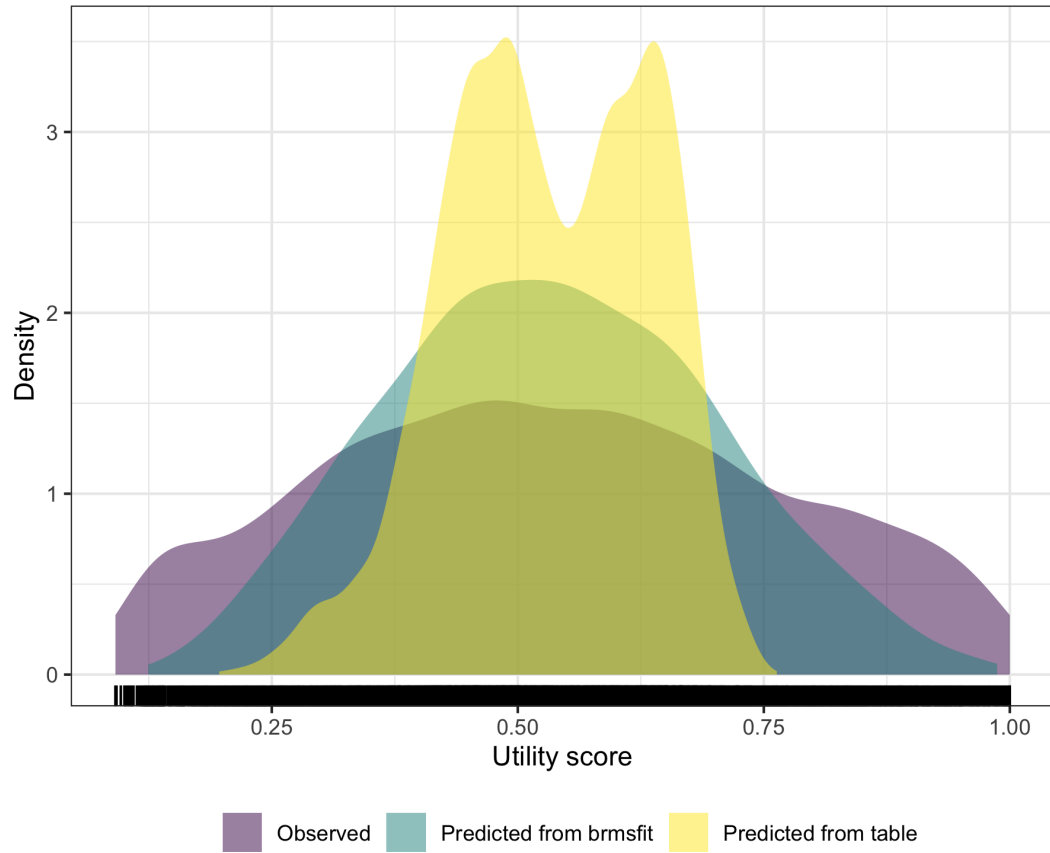


Figure 361: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

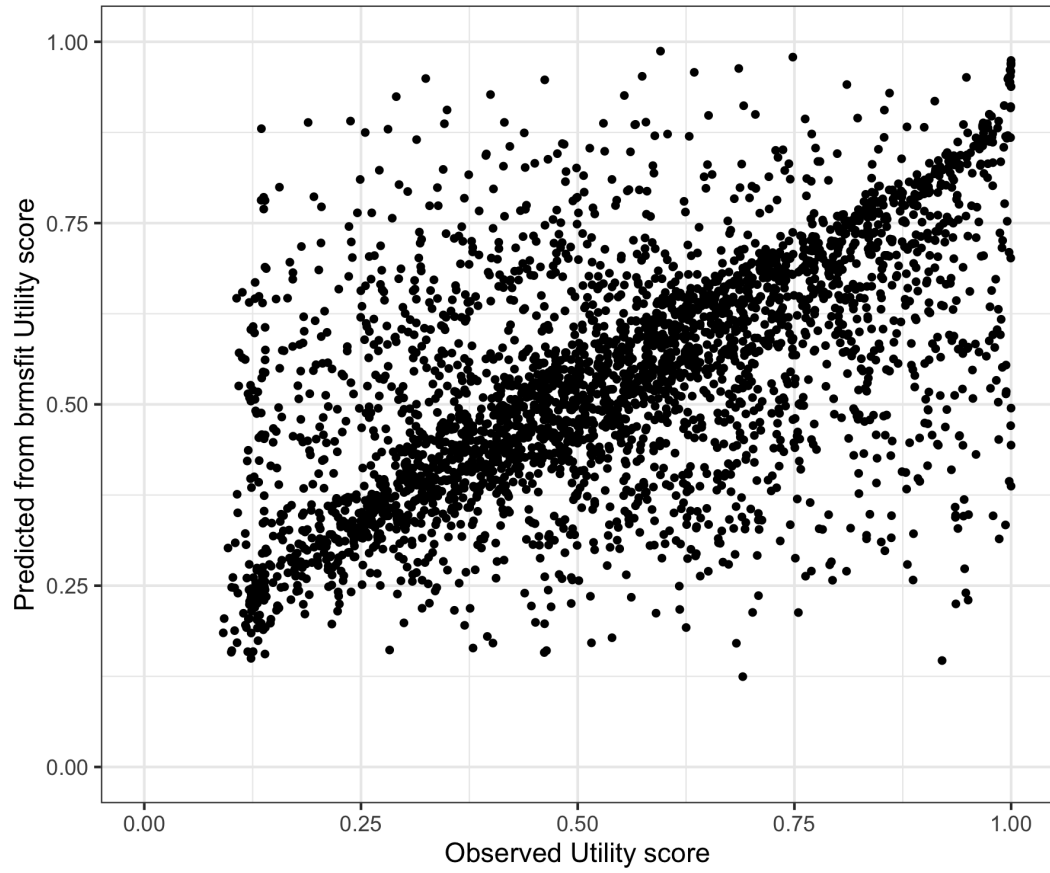


Figure 362: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

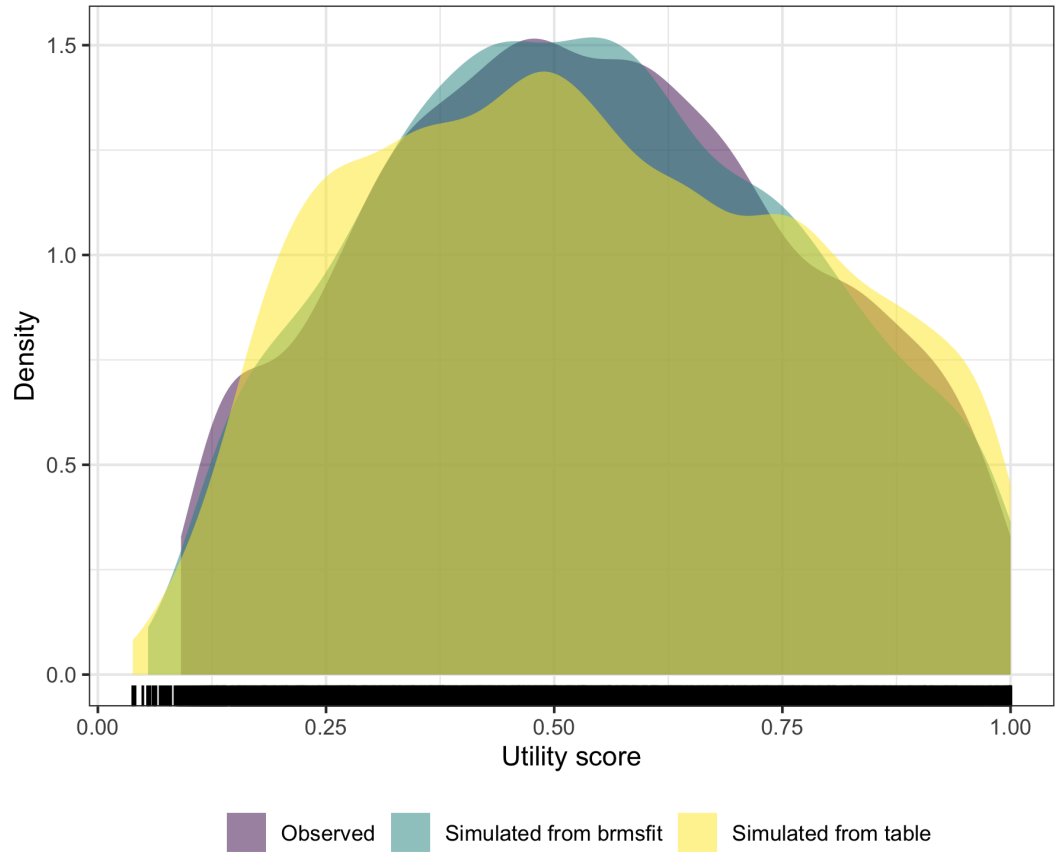


Figure 363: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

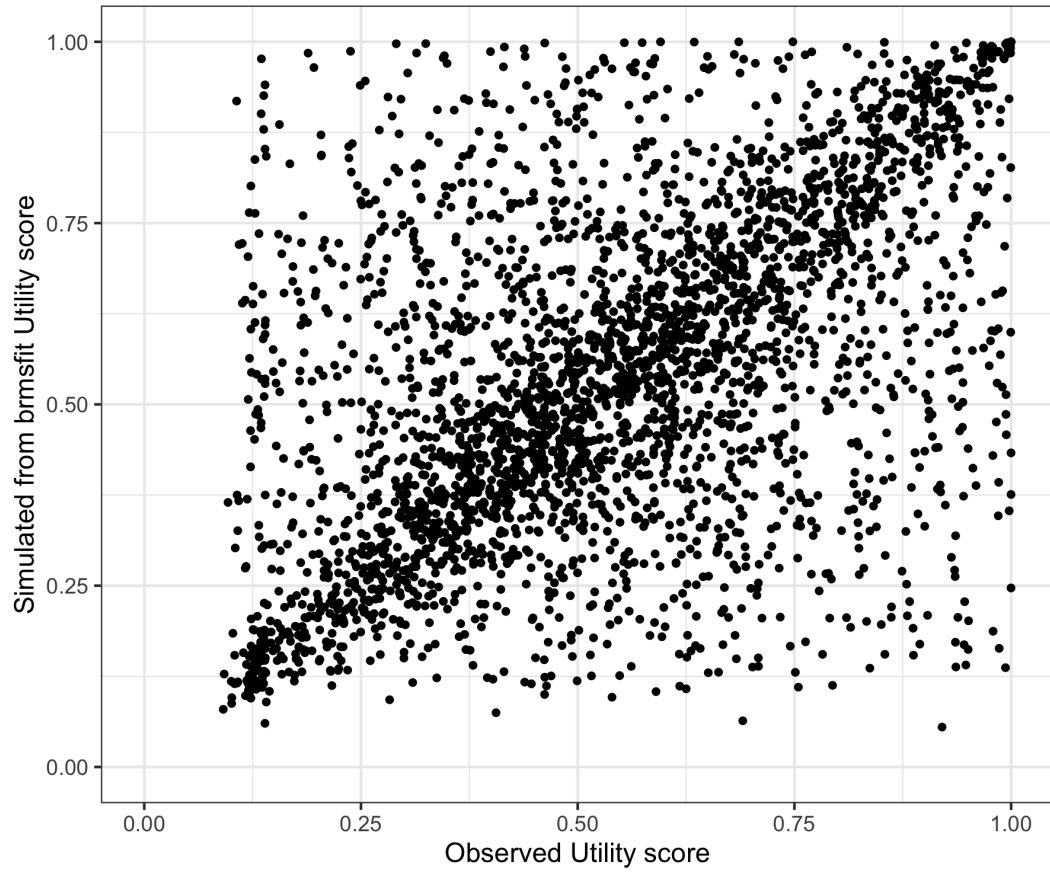


Figure 364: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

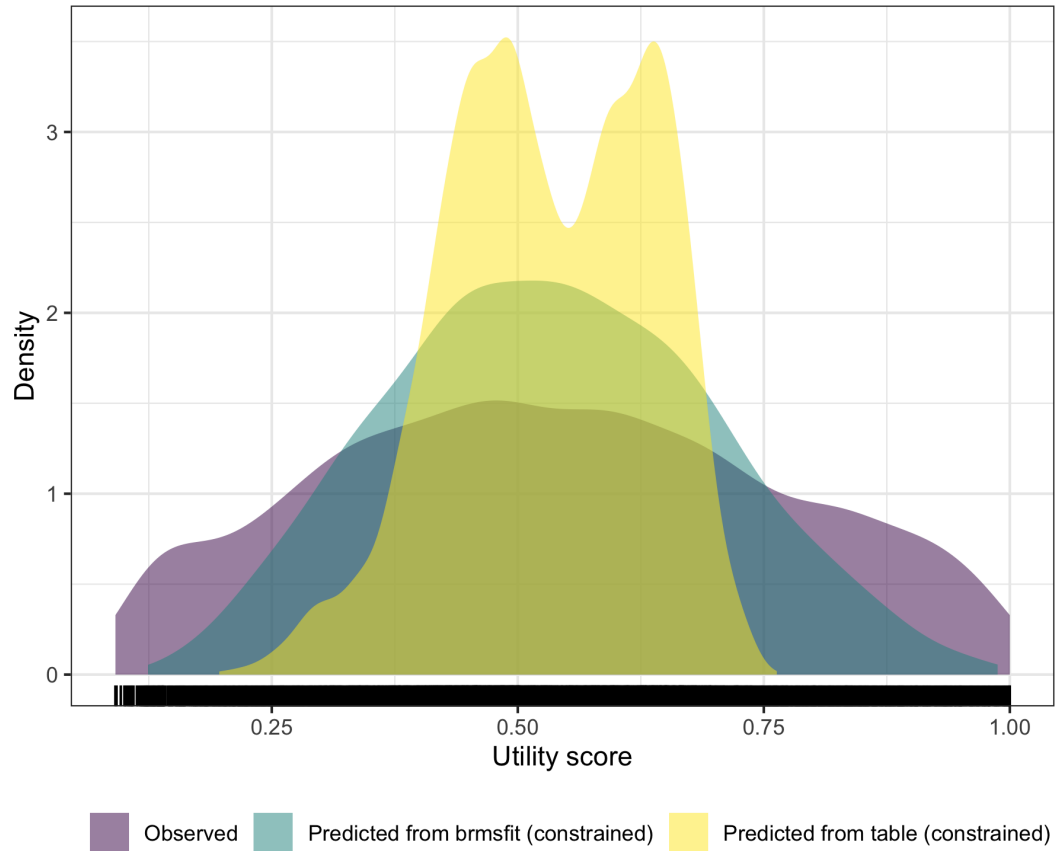


Figure 365: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

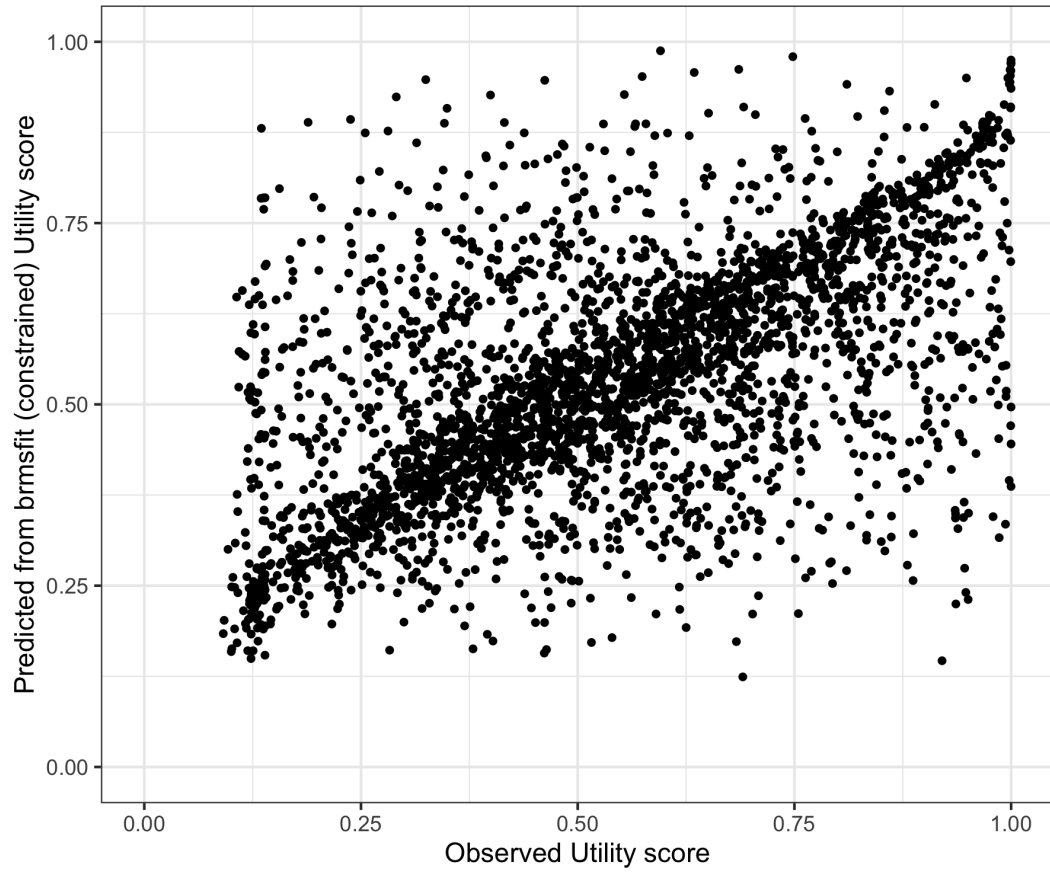


Figure 366: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

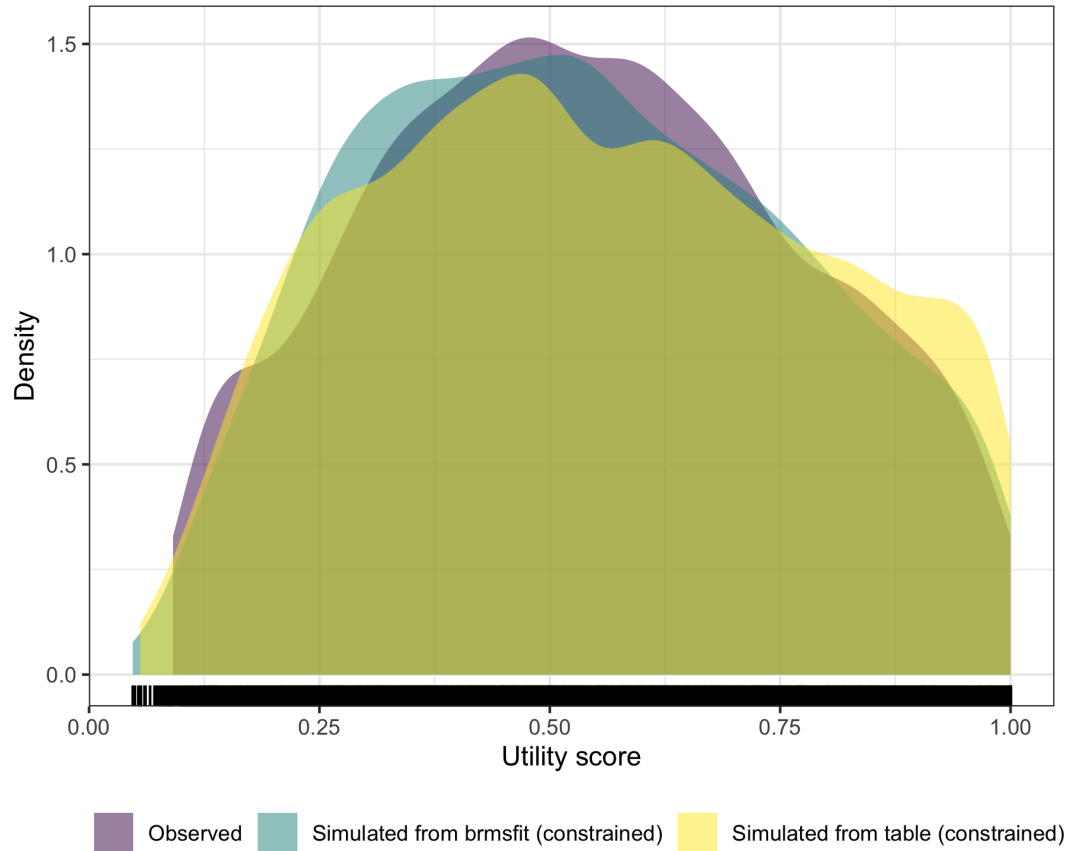


Figure 367: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

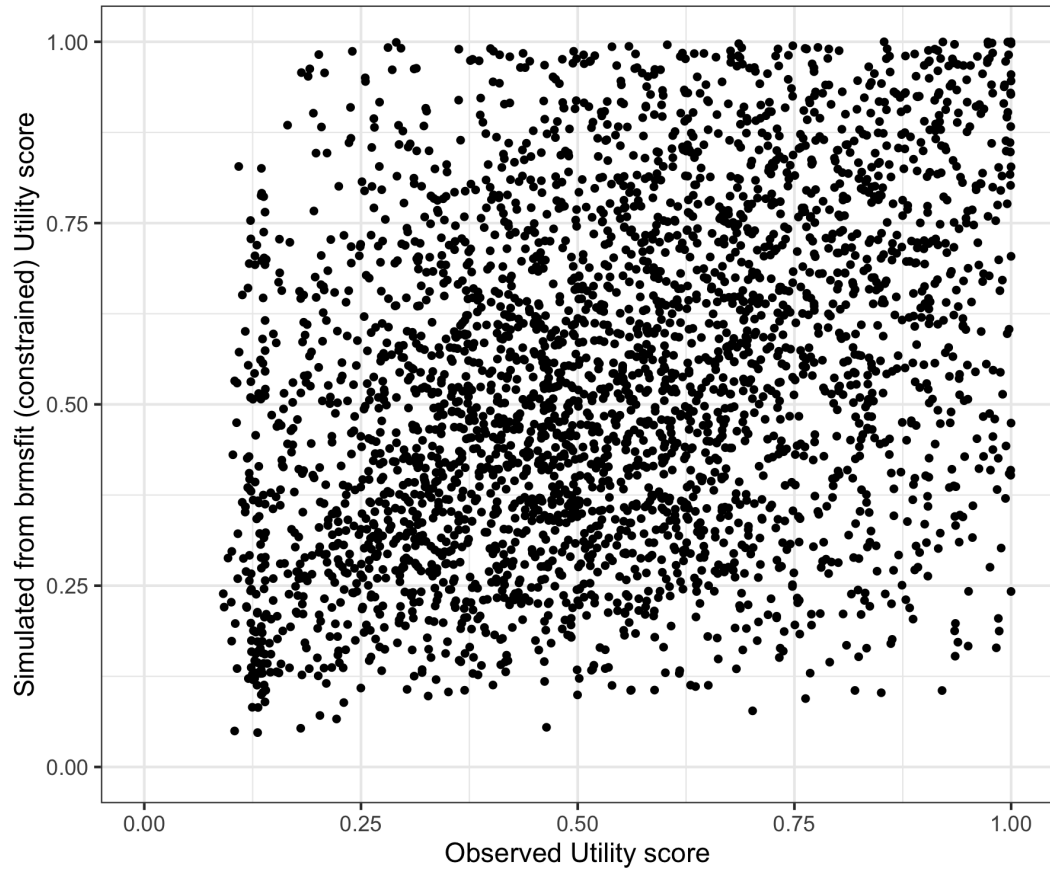


Figure 368: SOFAS with cdaysoor linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

39 SOFAS with dage generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - dage (age); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is SOFAS_dage_2_GLM_GSN_LOG.

Table 77: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3298)							
sd(Intercept)	0.07	0.04	0.00	0.16	1.02	275	776
Population-Level Effects:							
Intercept	-0.83	0.05	-0.93	-0.72	1.00	17 056	5 984
SOFAS_scaled	0.62	0.06	0.51	0.73	1.00	10 060	6 304
dage	-0.01	0.00	-0.02	-0.01	1.00	13 726	5 802
dgenderMale	0.11	0.01	0.08	0.14	1.00	17 692	5 813
dgenderOther	-0.09	0.06	-0.20	0.02	1.00	19 220	5 857
Family Specific Parameters:							
sigma	0.22	0.01	0.20	0.22	1.01	380	777

Formula: AQOL6D ~SOFAS_scaled + dage + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 78: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.11	0.04	0.067 , 0.211
RMSE	0.31	0.01	0.302 , 0.312

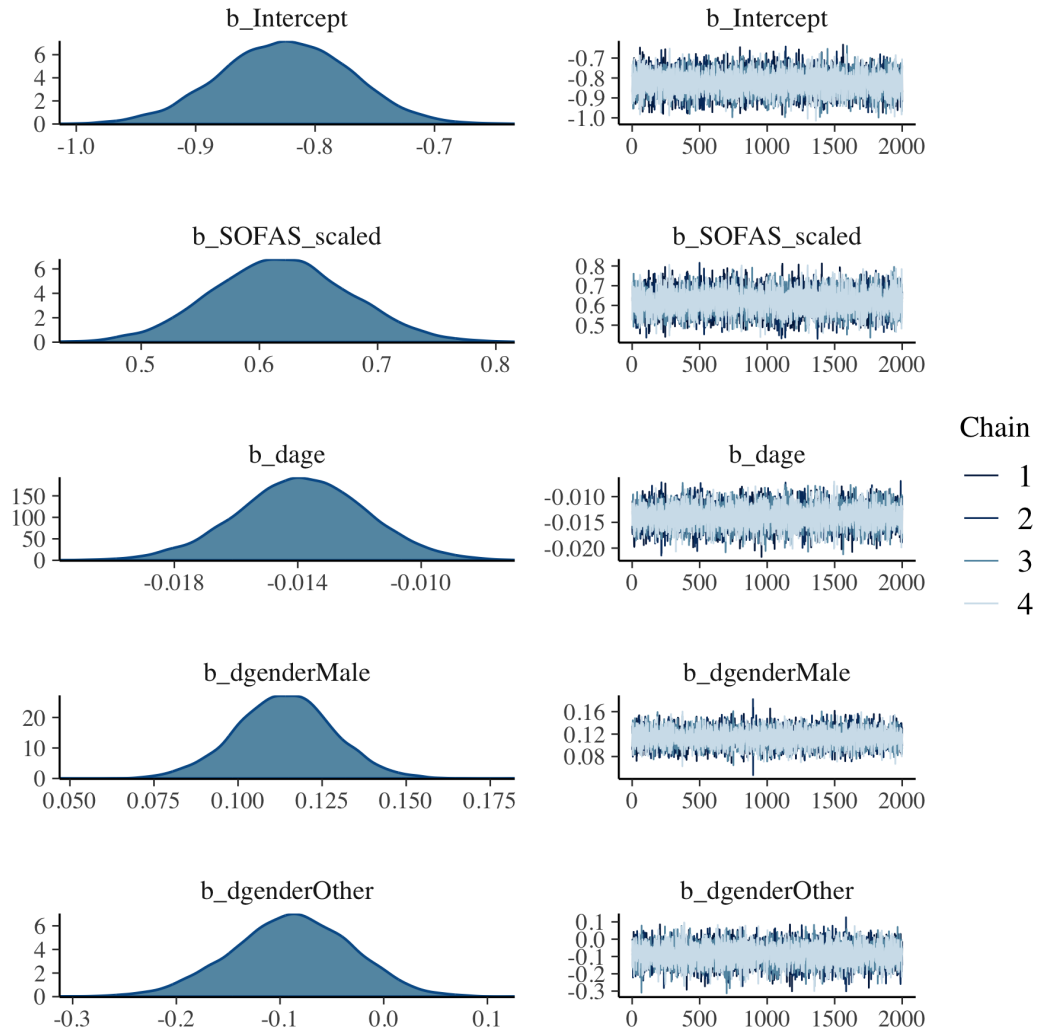


Figure 369: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link population level effects

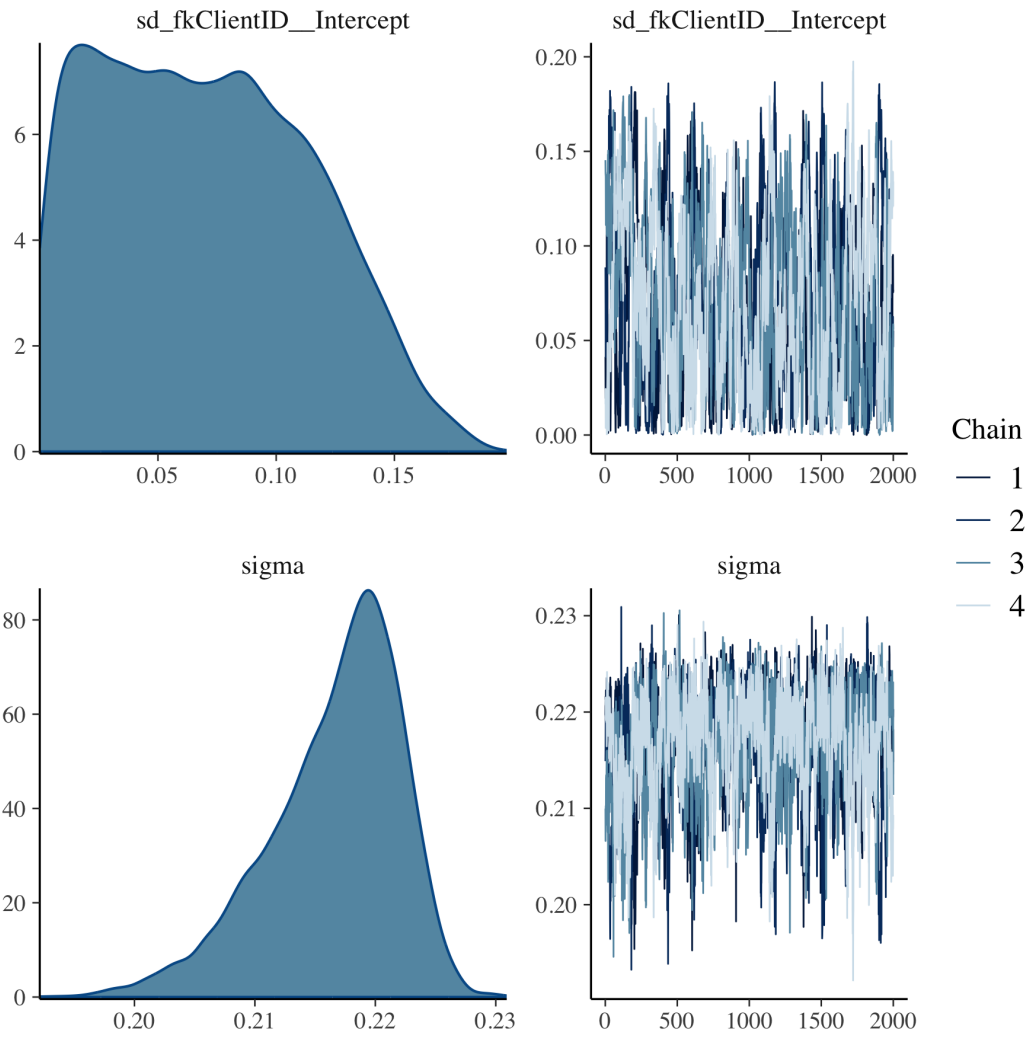


Figure 370: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link group level effects

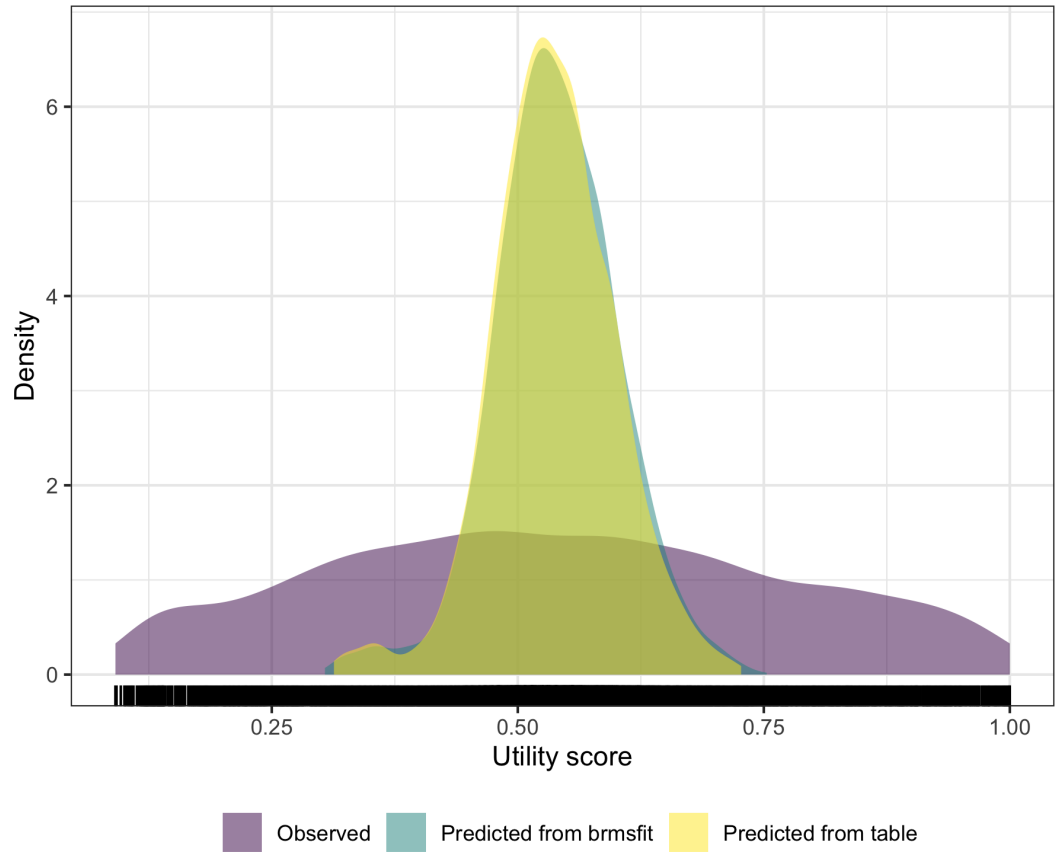


Figure 371: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

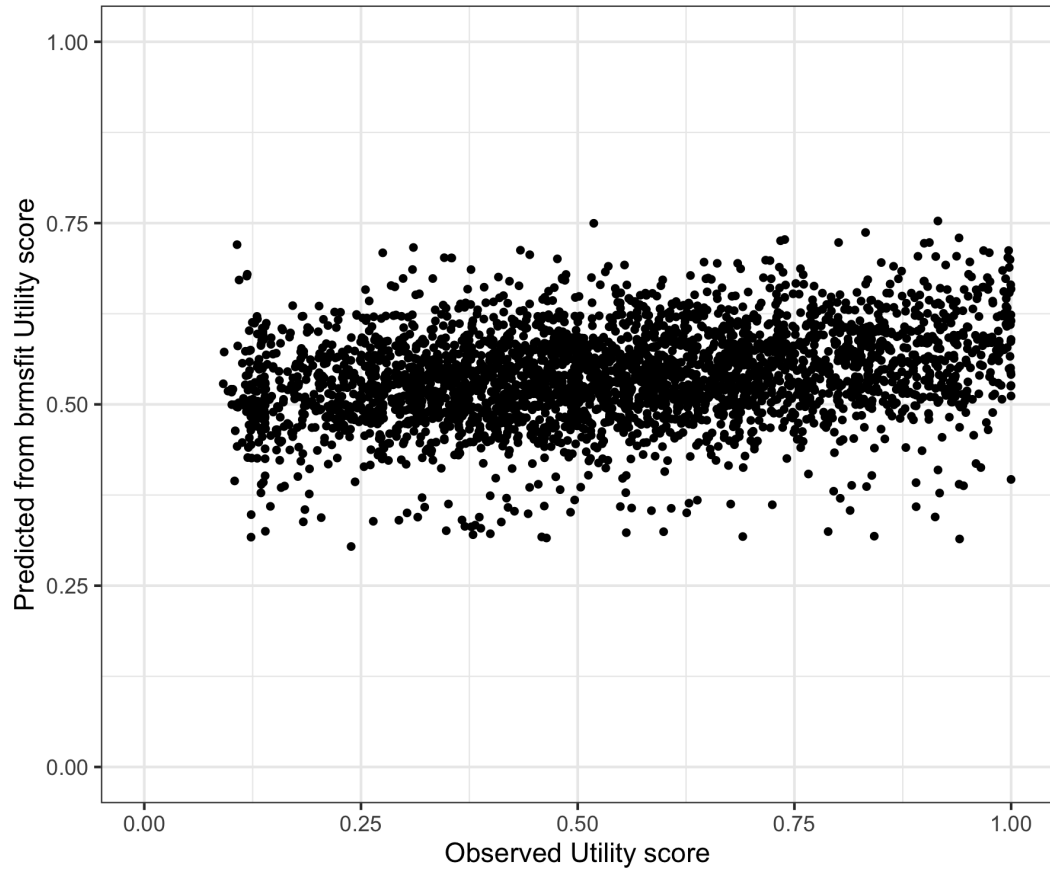


Figure 372: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

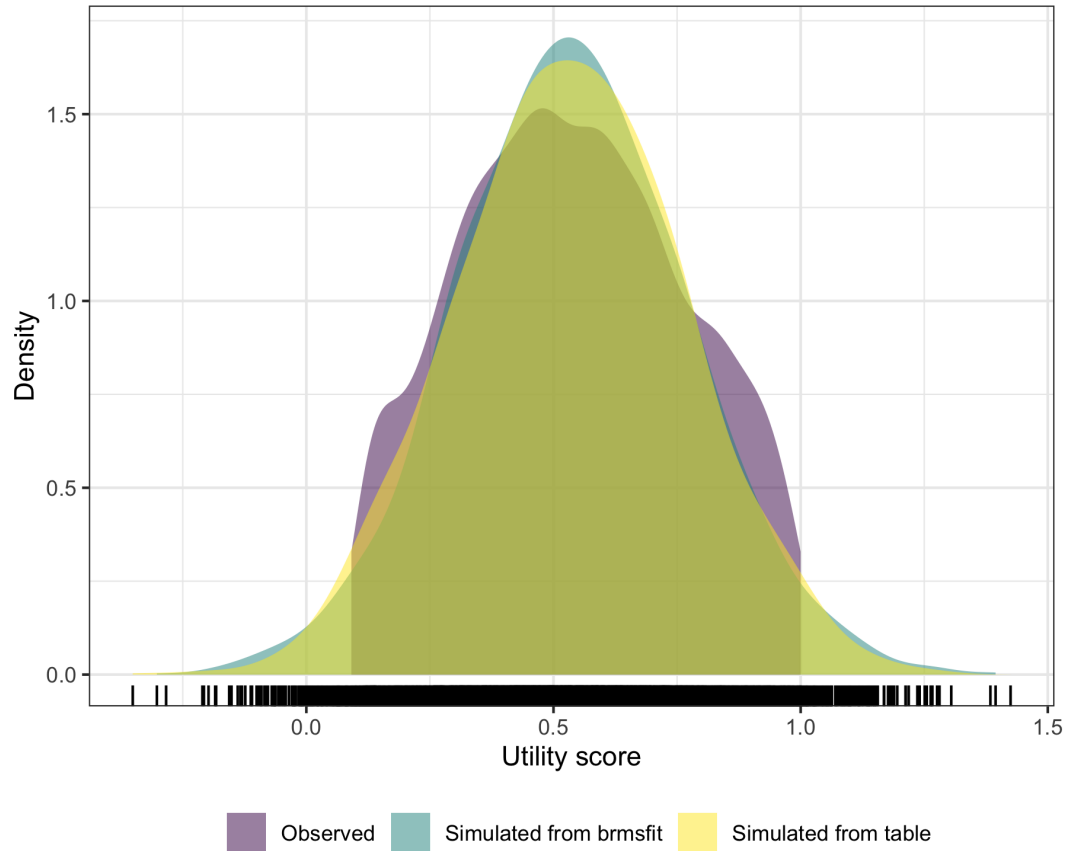


Figure 373: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

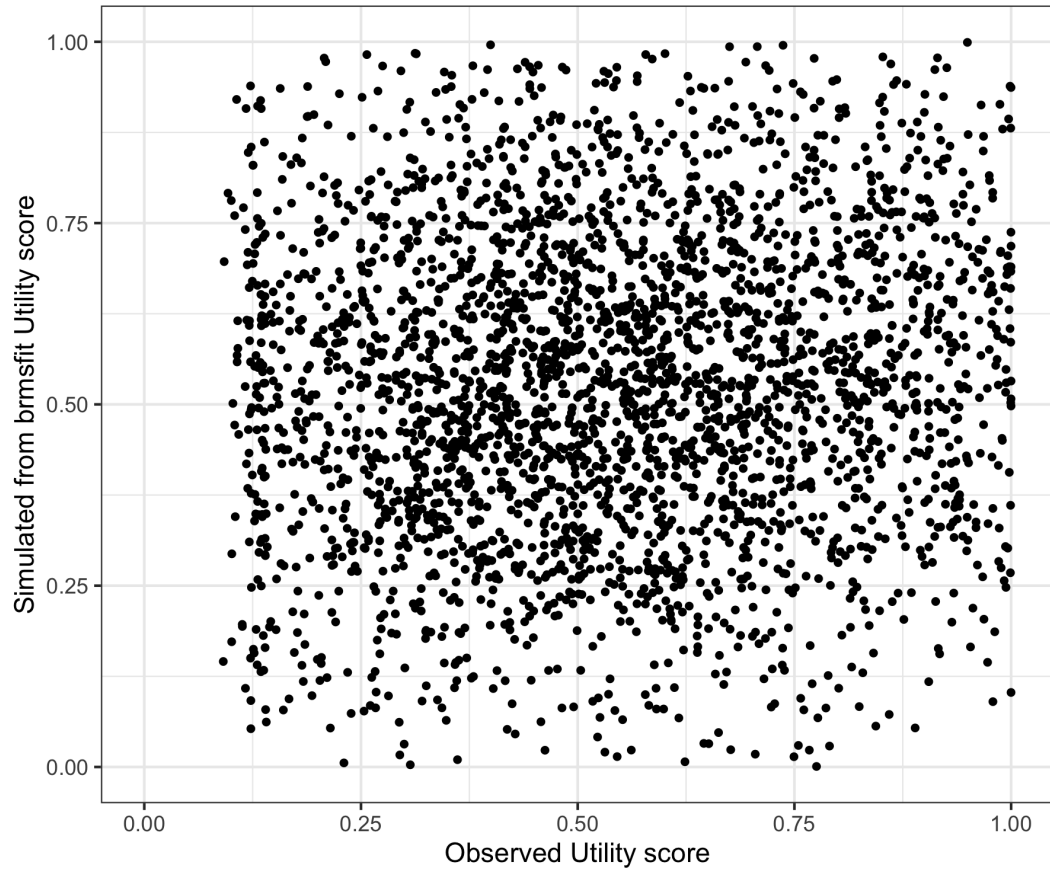


Figure 374: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

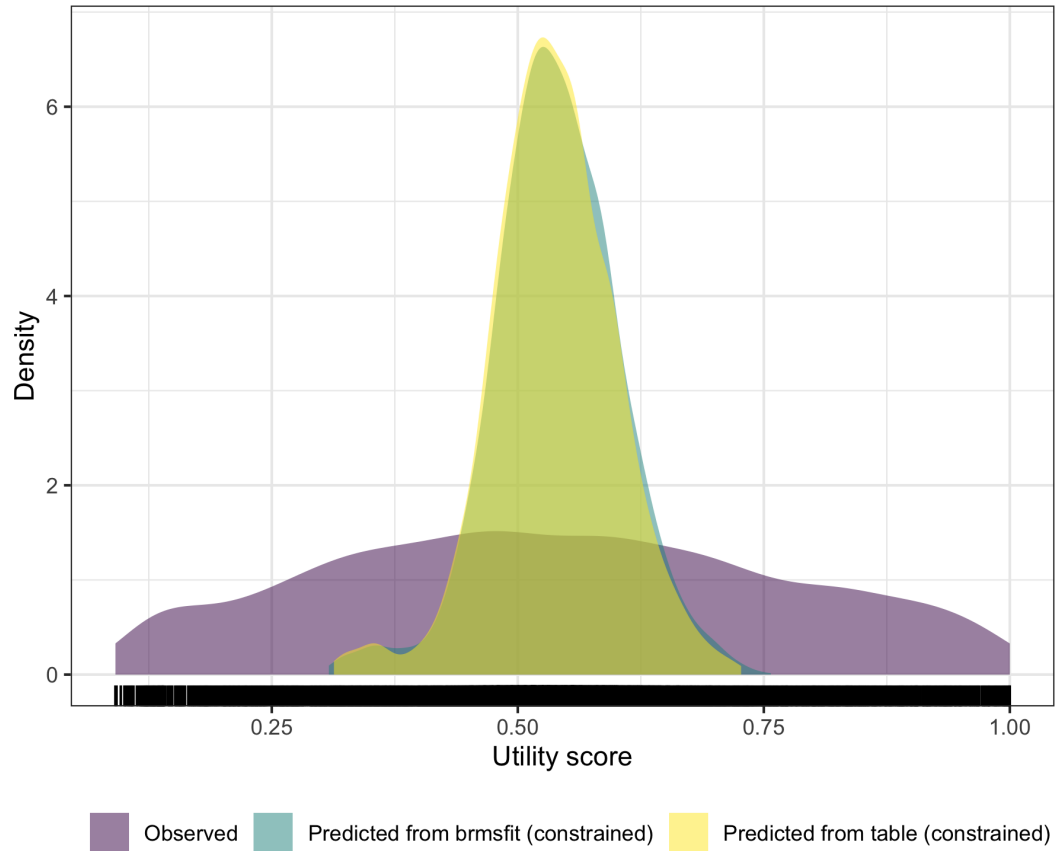


Figure 375: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

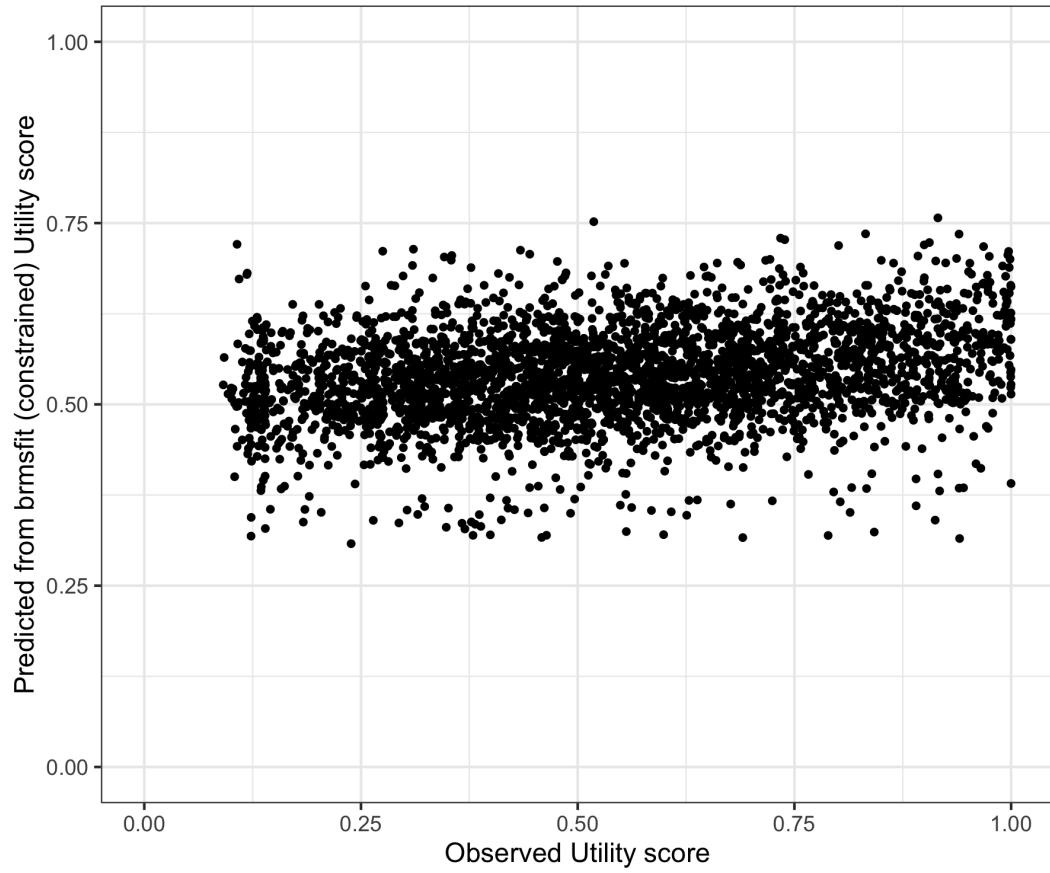


Figure 376: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

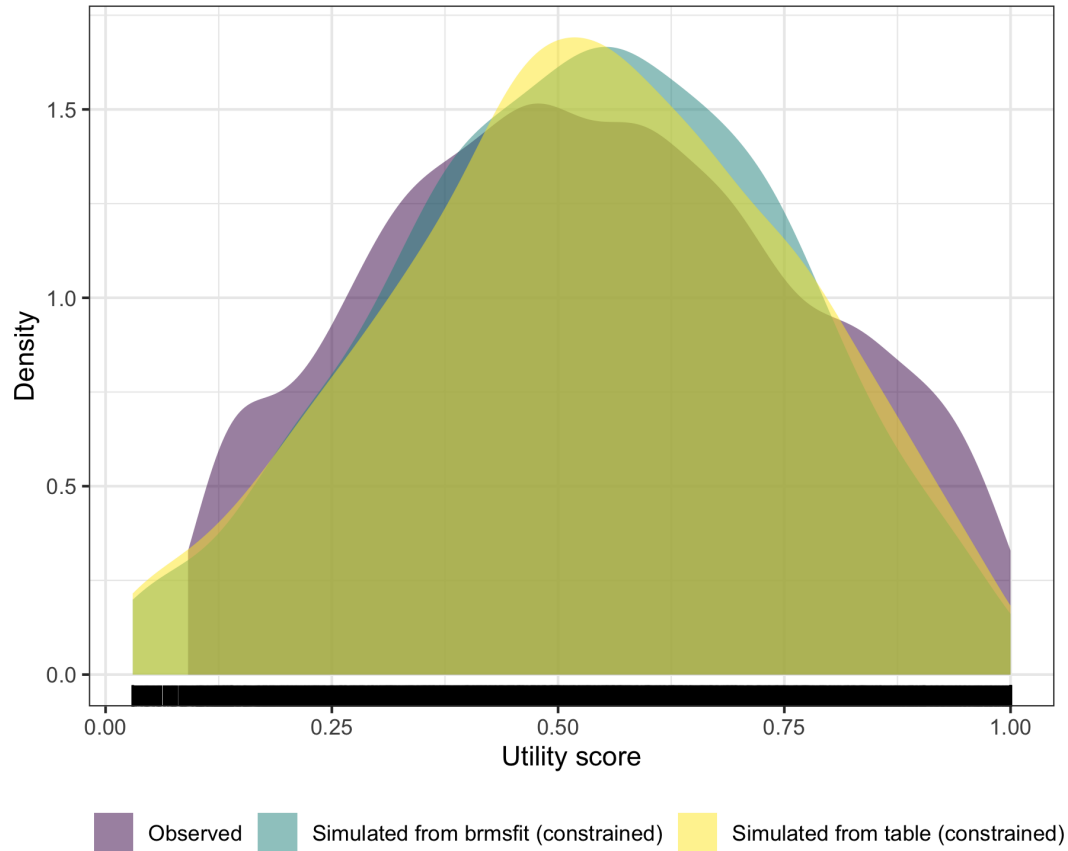


Figure 377: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

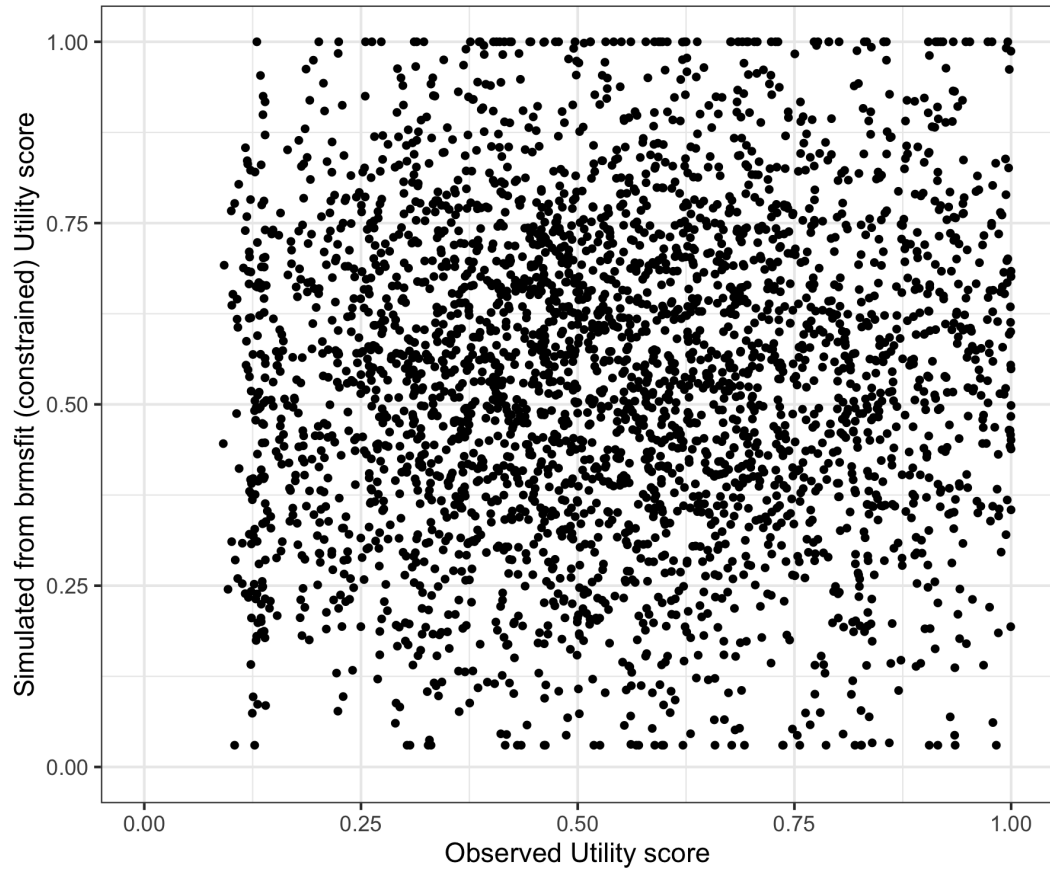


Figure 378: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

40 SOFAS with dage linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - dage (age); - dgenderMale (); and - dgenderOther (). The catalogue reference for this model is SOFAS_dage_2_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 215 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>.

Table 79: SOFAS with dage linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3298)							
sd(Intercept)	0.48	0.21	0.03	0.76	2.12	5	15
Population-Level Effects:							
Intercept	-0.52	0.09	-0.69	-0.34	1.00	1 832	3 504
SOFAS_scaled	0.94	0.09	0.77	1.12	1.00	1 783	1 800
dage	-0.03	0.00	-0.03	-0.02	1.00	1 941	1 854
dgenderMale	0.22	0.03	0.16	0.27	1.00	1 793	2 801
dgenderOther	-0.16	0.09	-0.34	0.02	1.00	1 677	2 837
Family Specific Parameters:							
sigma	0.51	0.20	0.12	0.77	2.13	5	12

Formula: AQOL6D_CLL ~SOFAS_scaled + dage + dgender + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS

and Tail_ESS are effective sample size measures, and Rhat is the potential

scale reduction factor on split chains (at convergence, Rhat = 1).

Table 80: SOFAS with dage linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.52	0.30	0.069 , 0.977
RMSE	1.09	0.05	1.045 , 1.132

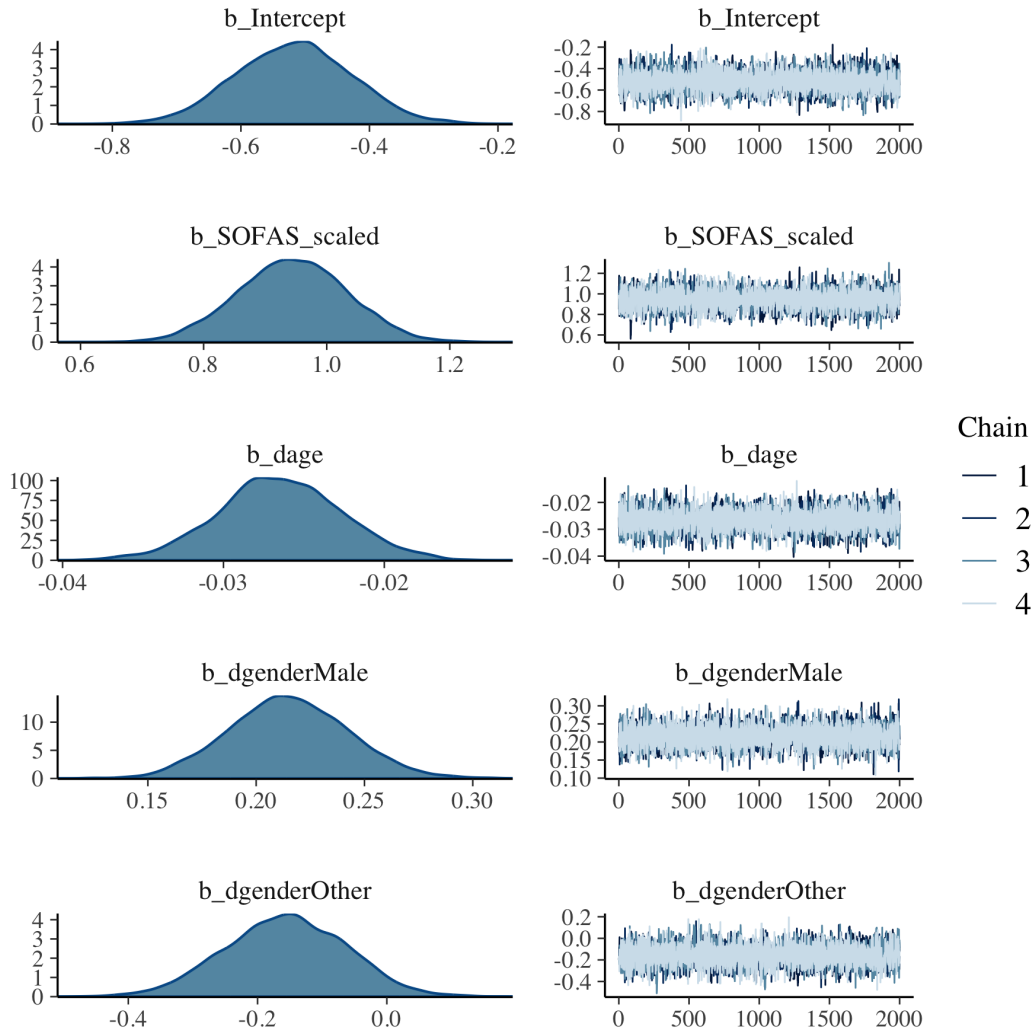


Figure 379: SOFAS with dage linear mixed model with complementary log log transformation population level effects

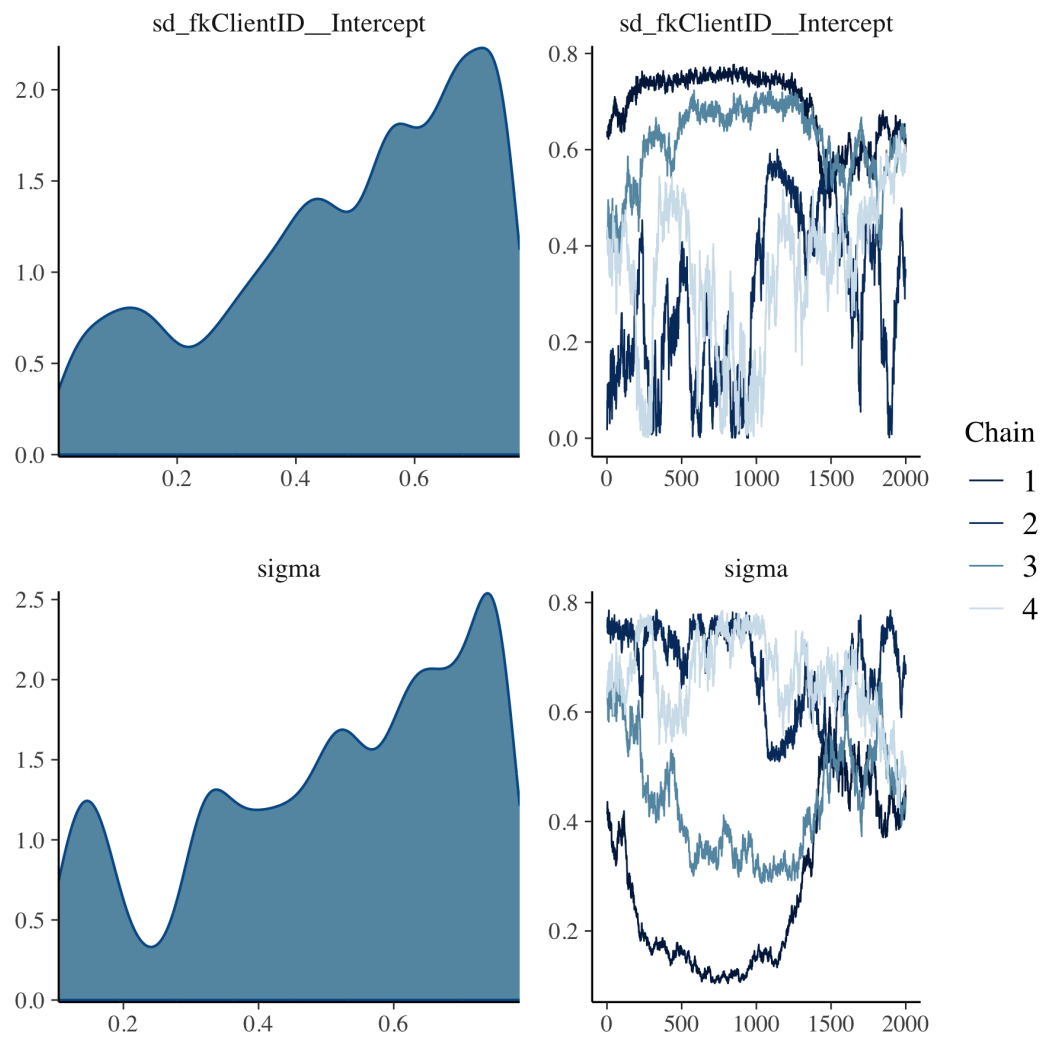


Figure 380: SOFAS with dage linear mixed model with complementary log log transformation group level effects

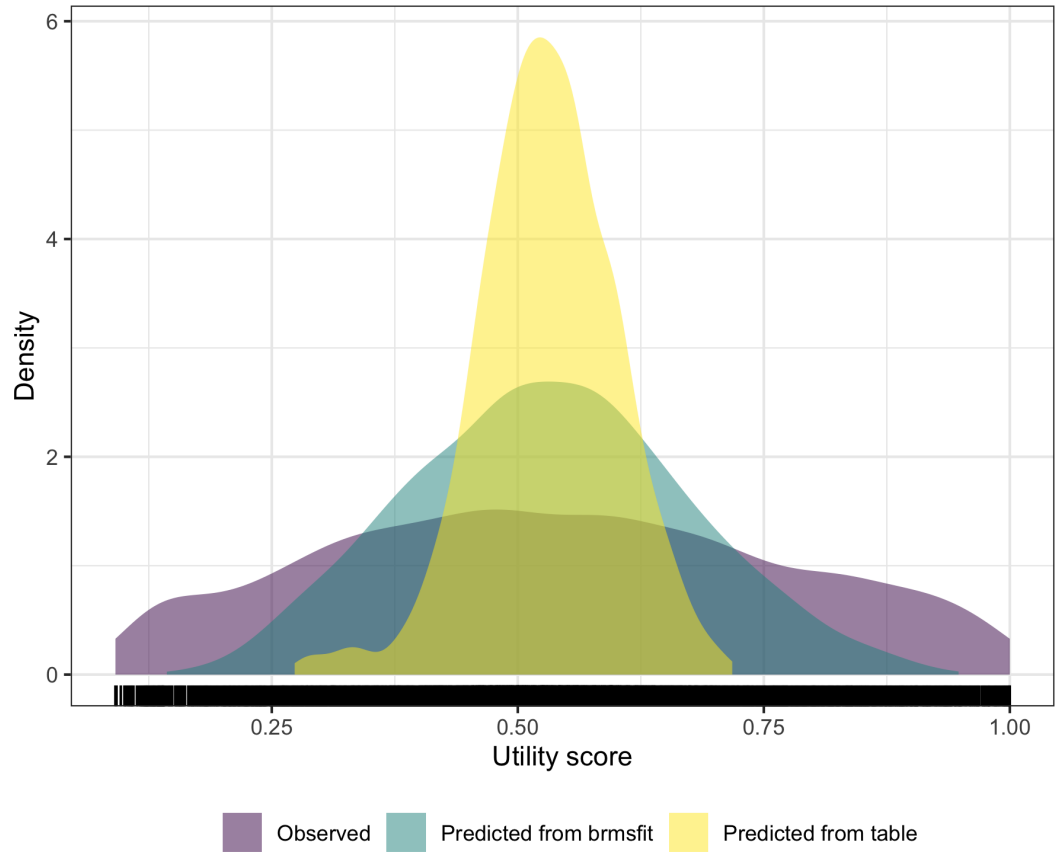


Figure 381: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

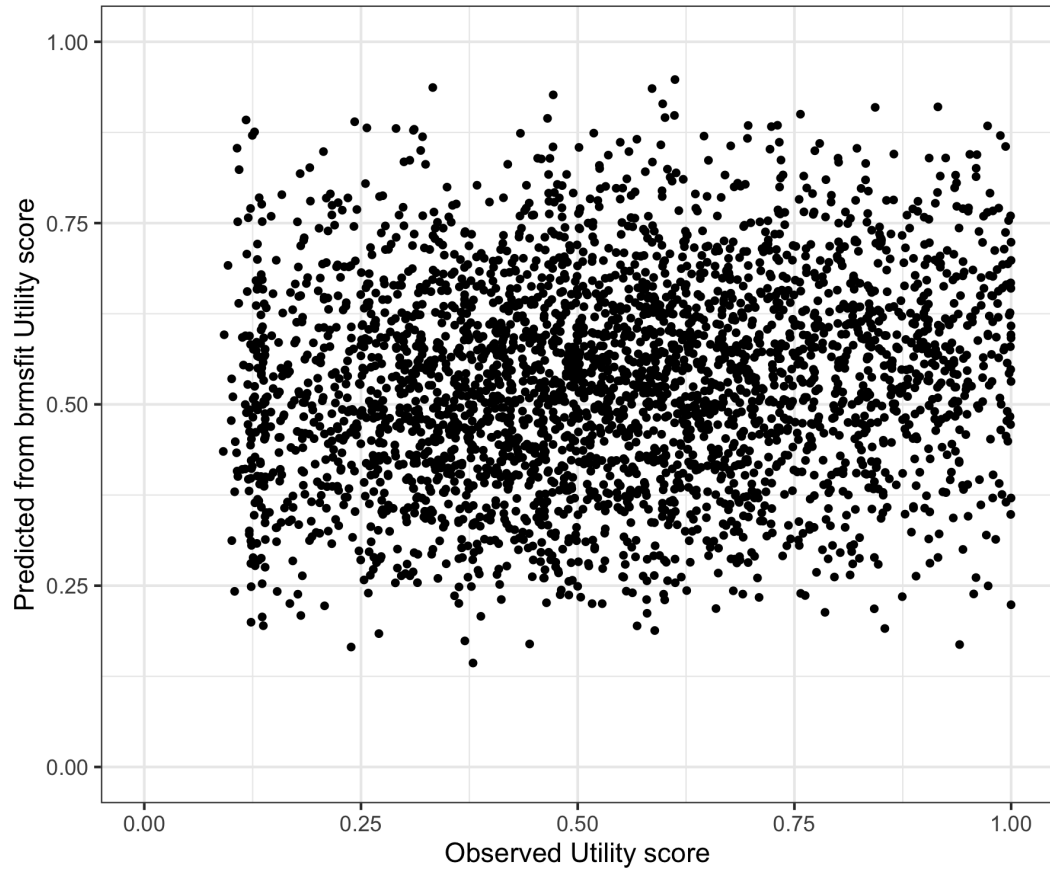


Figure 382: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

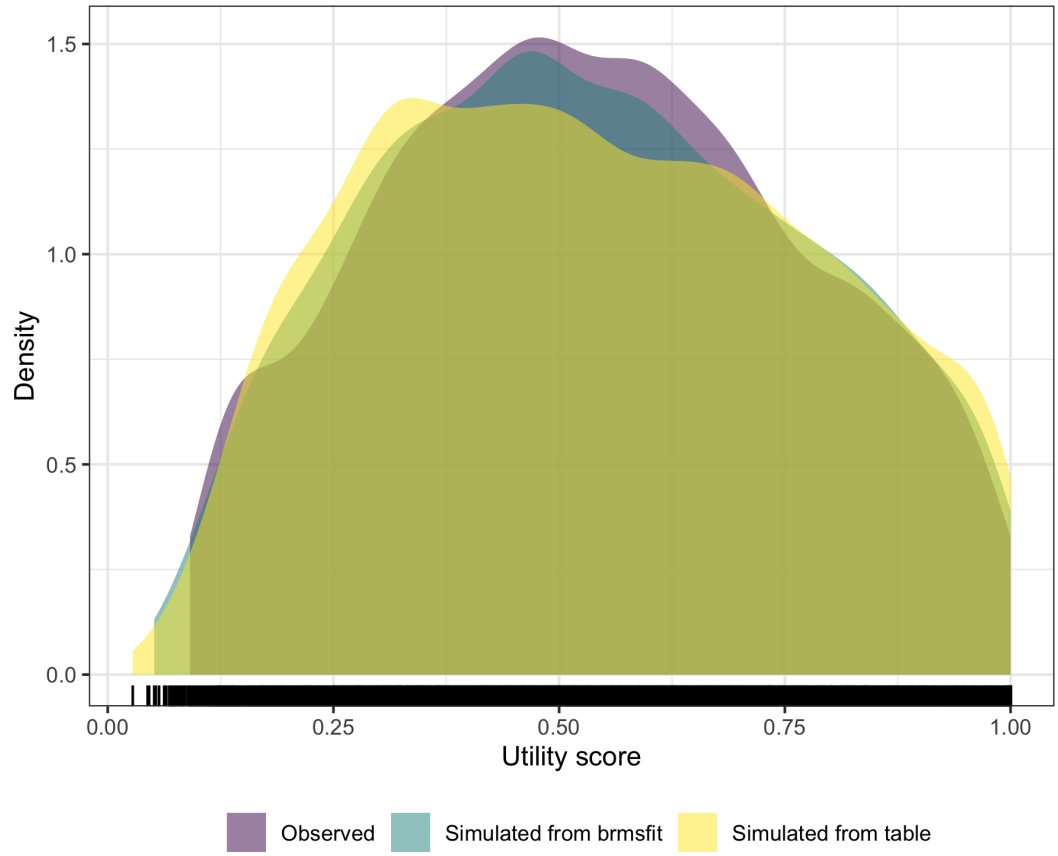


Figure 383: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

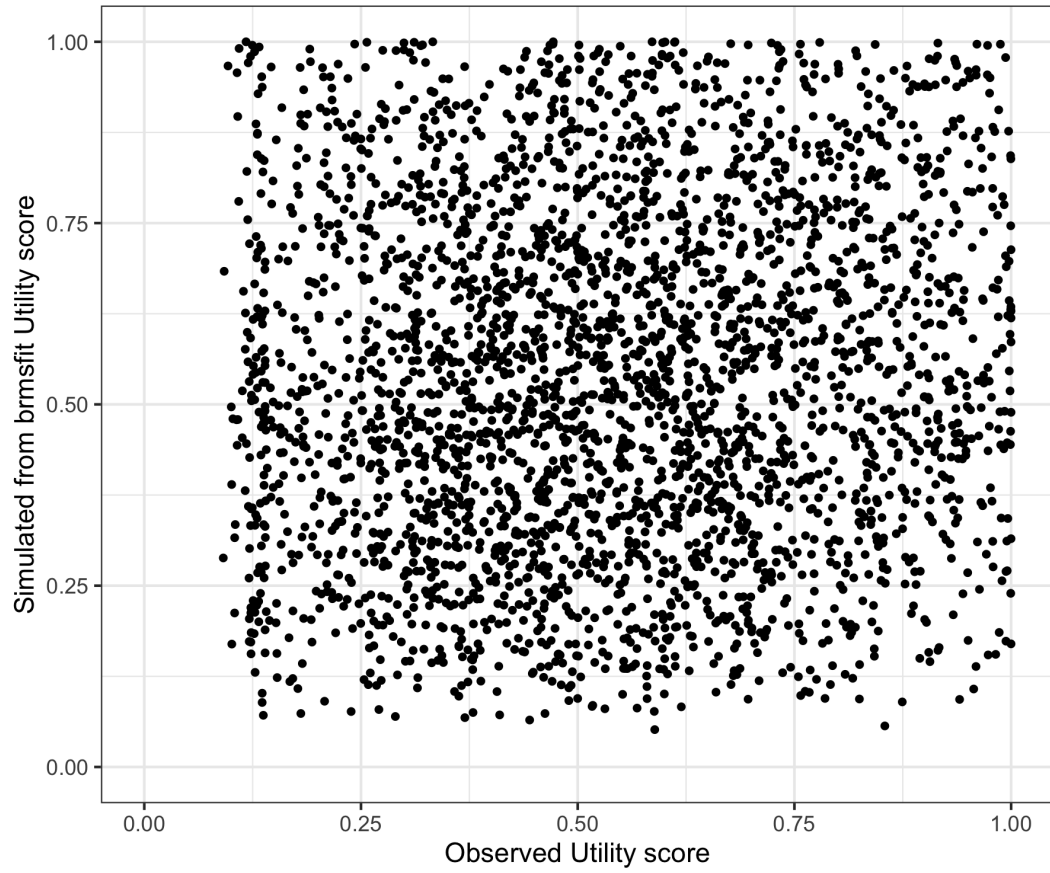


Figure 384: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

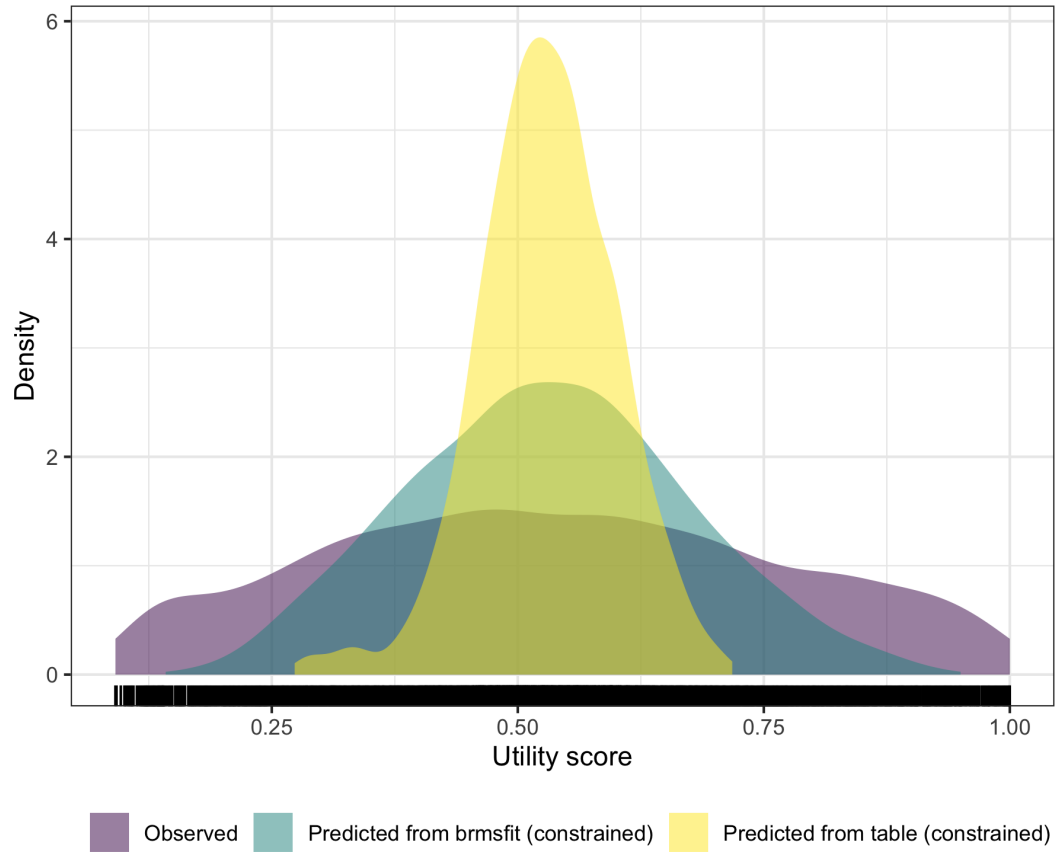


Figure 385: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

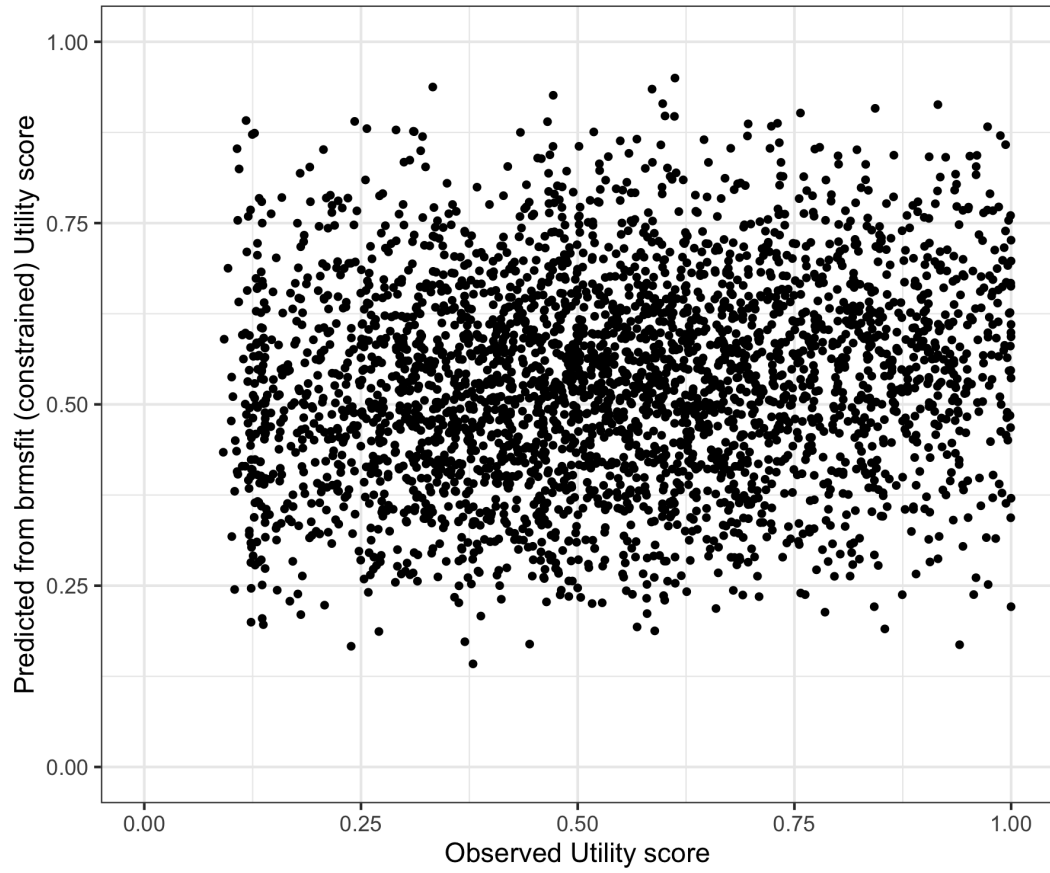


Figure 386: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

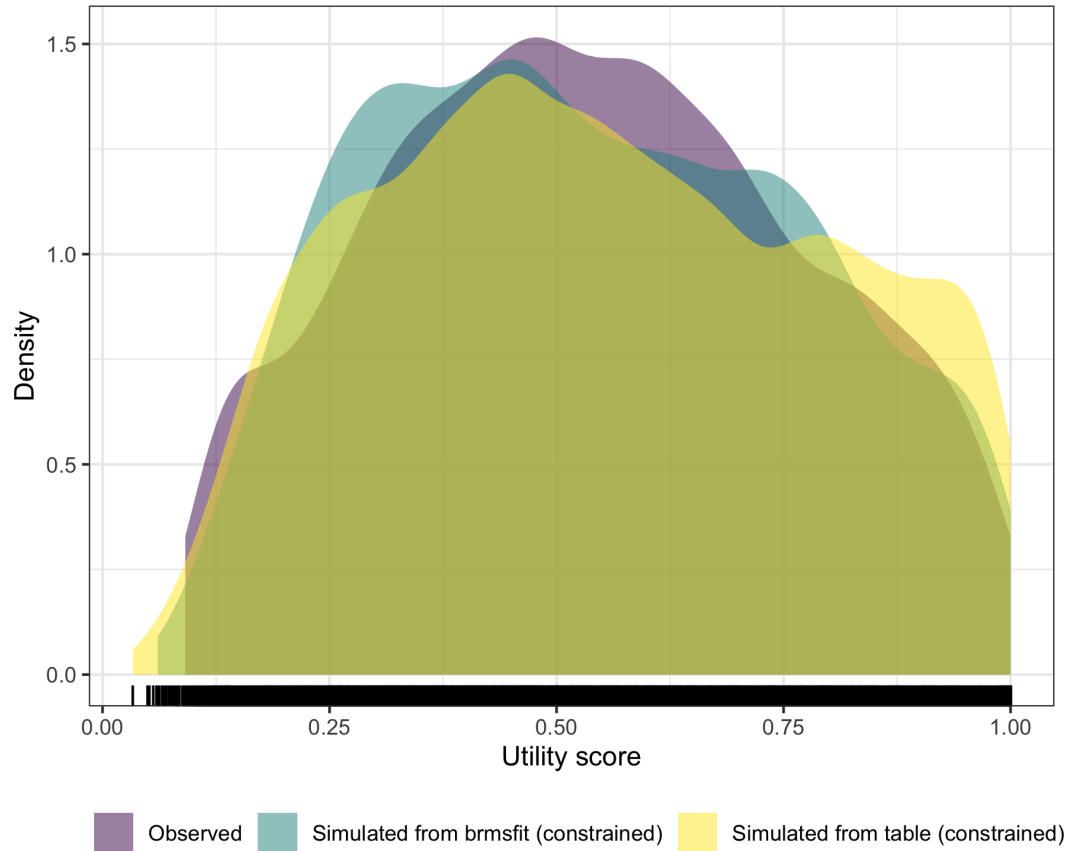


Figure 387: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

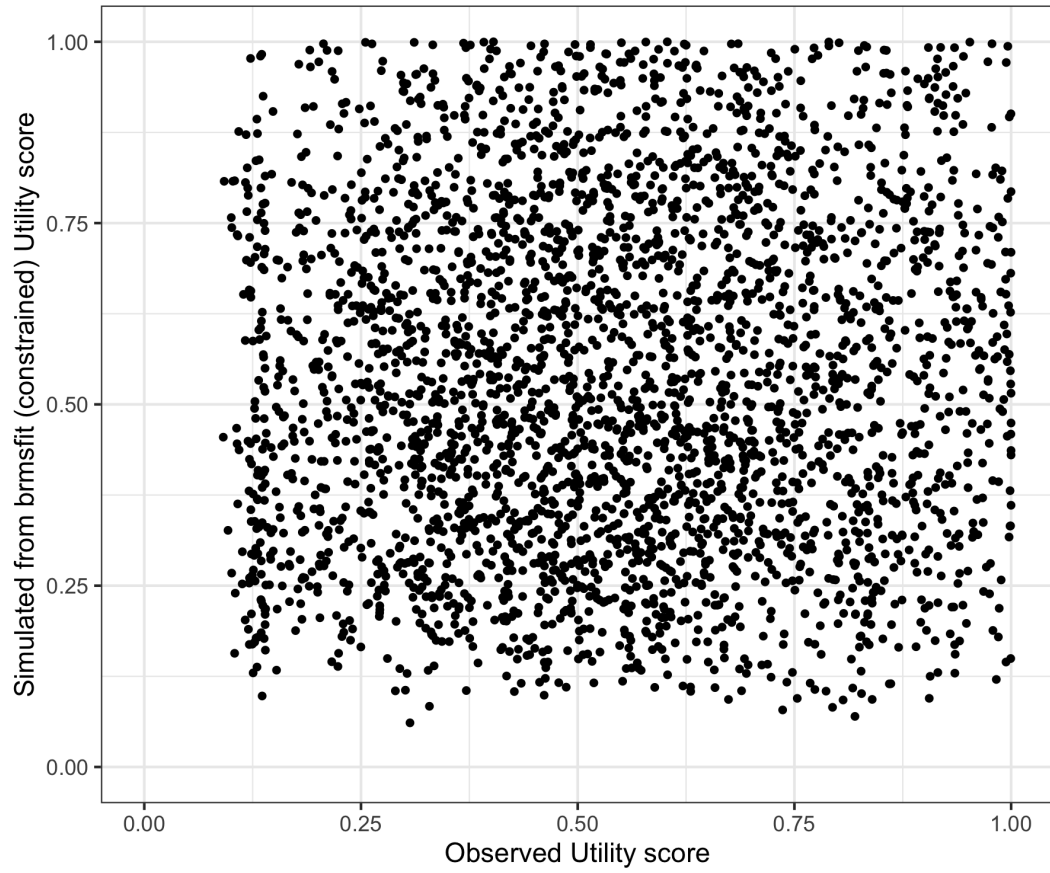


Figure 388: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

41 SOFAS with dage generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - dage (age); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is `SOFAS_dage_3_GLM_GSN_LOG`.

Table 81: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3216)							
sd(Intercept)	0.06	0.04	0.00	0.15	1.04	206	492
Population-Level Effects:							
Intercept	-0.81	0.06	-0.94	-0.69	1.00	11 922	6 085
SOFAS_scaled	0.62	0.06	0.51	0.74	1.00	8 925	5 694
dage	-0.01	0.00	-0.02	-0.01	1.00	13 454	6 847
dstudyingworkingBoth	0.06	0.02	0.02	0.11	1.00	8 475	5 995
dstudyingworkingStudy	0.03	0.02	-0.01	0.08	1.00	8 240	6 512
dstudyingworkingWork	0.05	0.02	-0.00	0.10	1.00	8 473	5 765
Family Specific Parameters:							
sigma	0.22	0.01	0.21	0.23	1.03	302	577

Formula: `AQOL6D ~SOFAS_scaled + dage + dstudyingworking + (1 | fkClientID)`

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using `sample(hmc)`. For each parameter, `Bulk_ESS` and `Tail_ESS` are effective sample size measures, and `Rhat` is the potential scale reduction factor on split chains (at convergence, `Rhat` = 1).

Table 82: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.09	0.04	0.051 , 0.185
RMSE	0.31	0.01	0.306 , 0.315

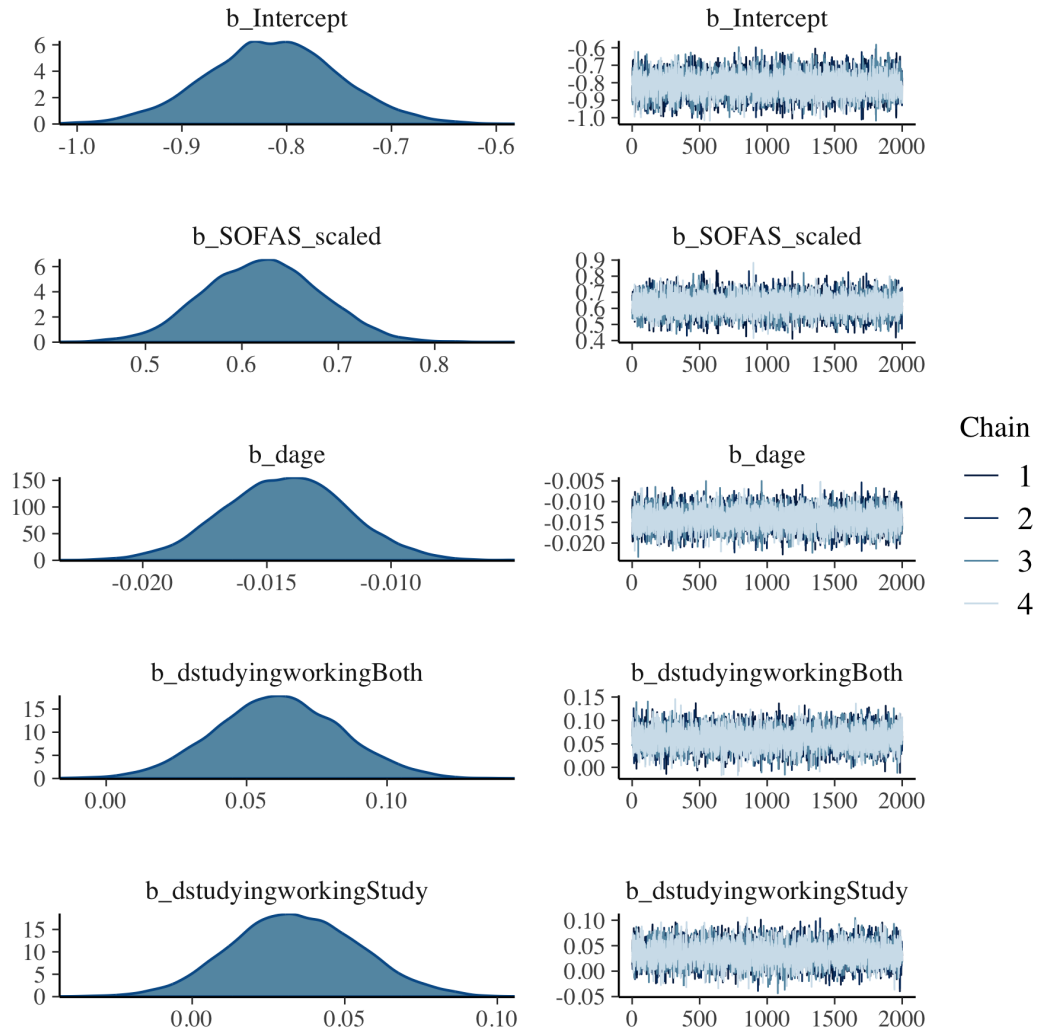


Figure 389: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link population level effects

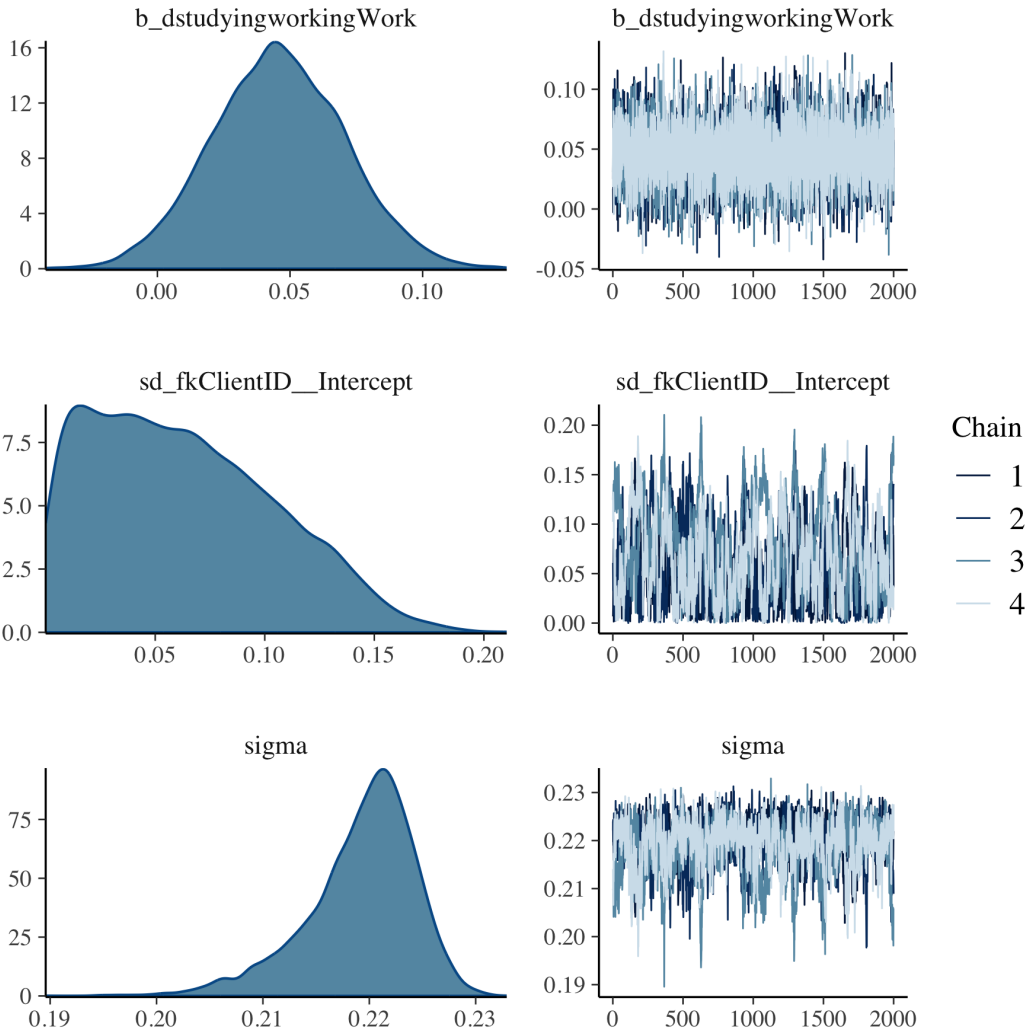


Figure 390: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link group level effects

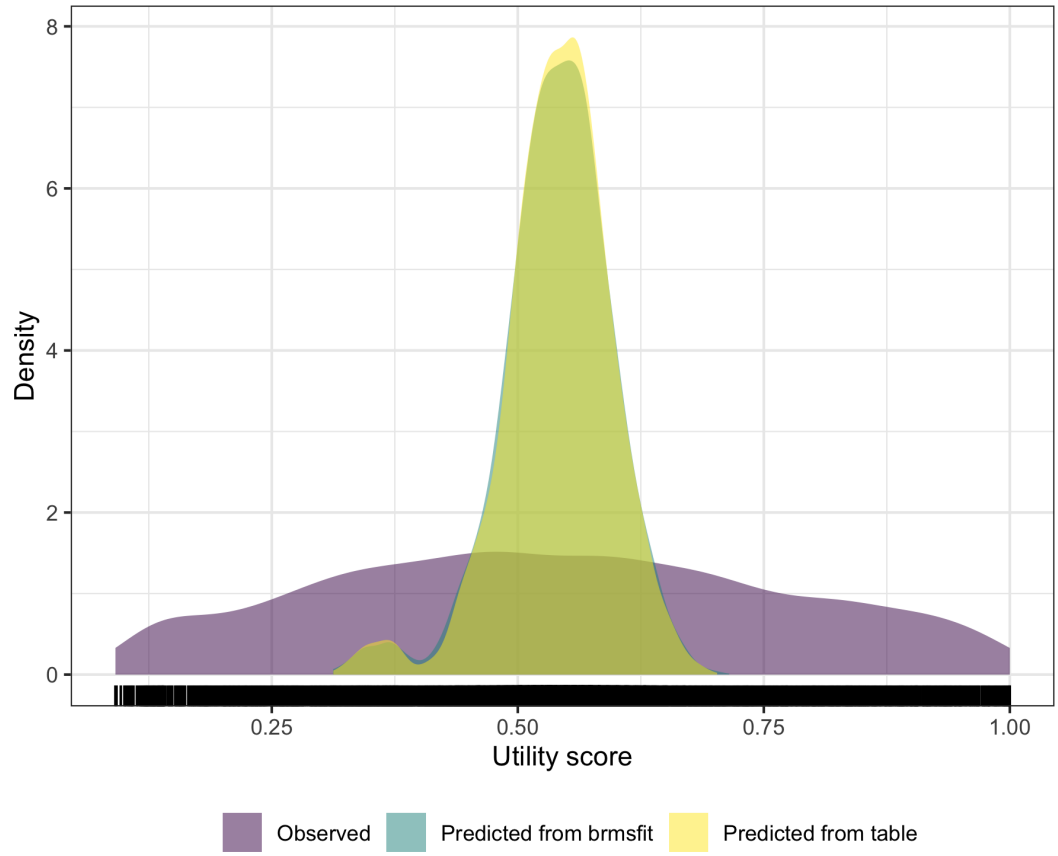


Figure 391: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

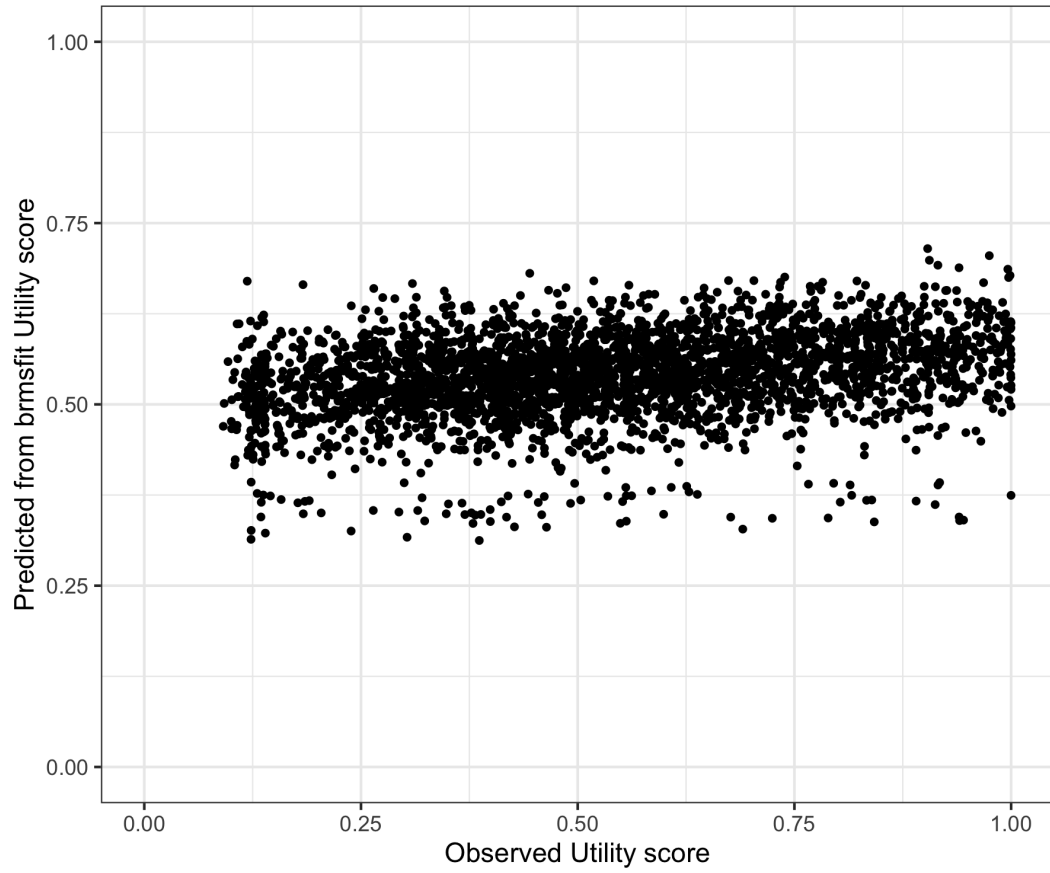


Figure 392: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

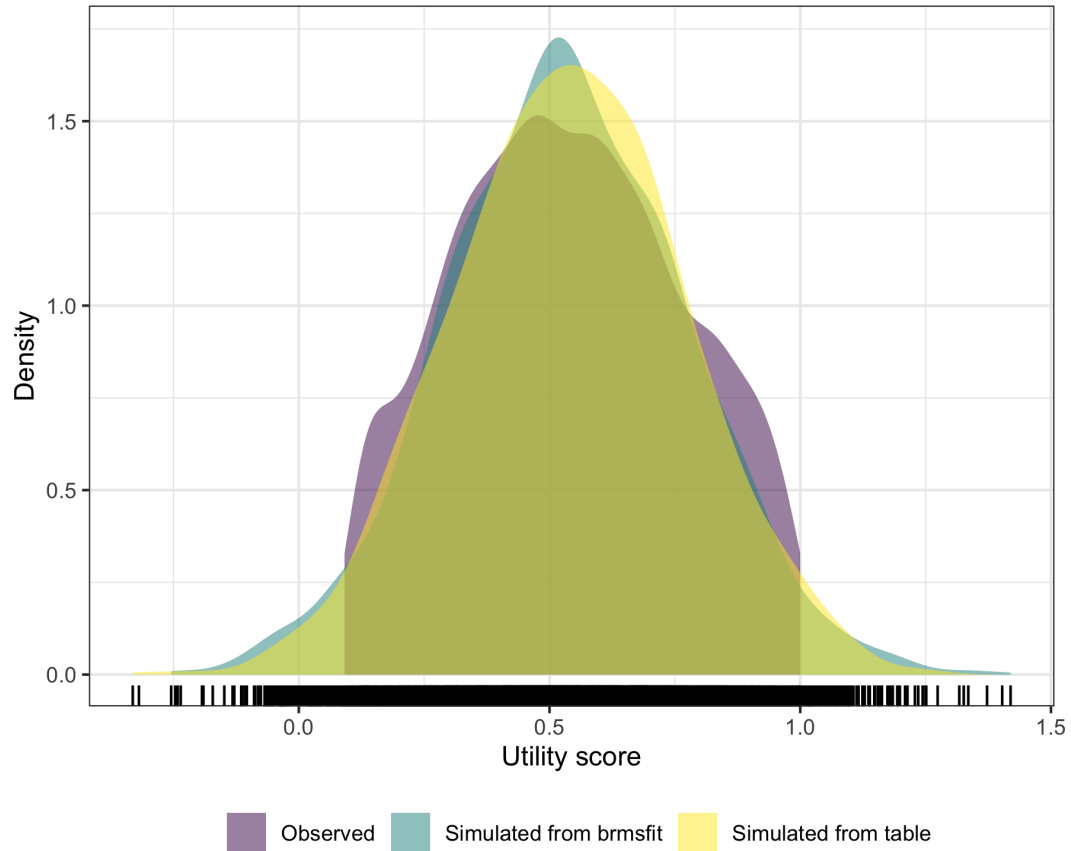


Figure 393: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

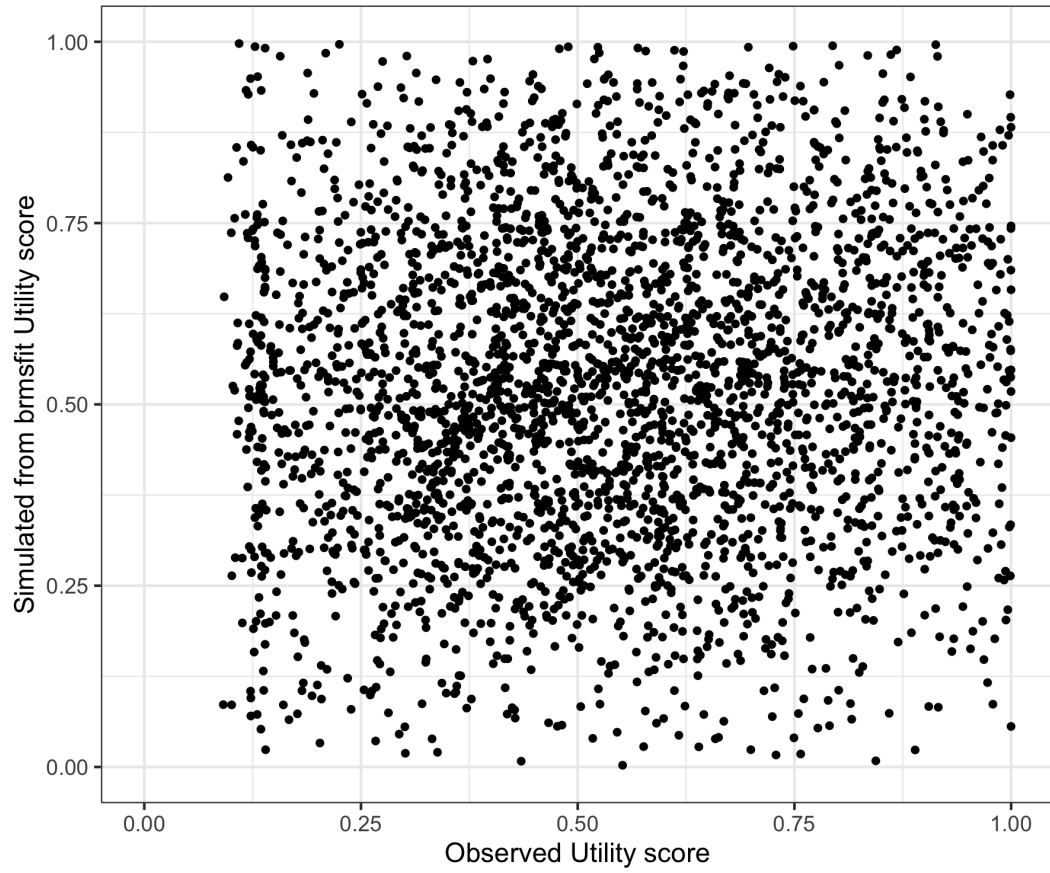


Figure 394: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

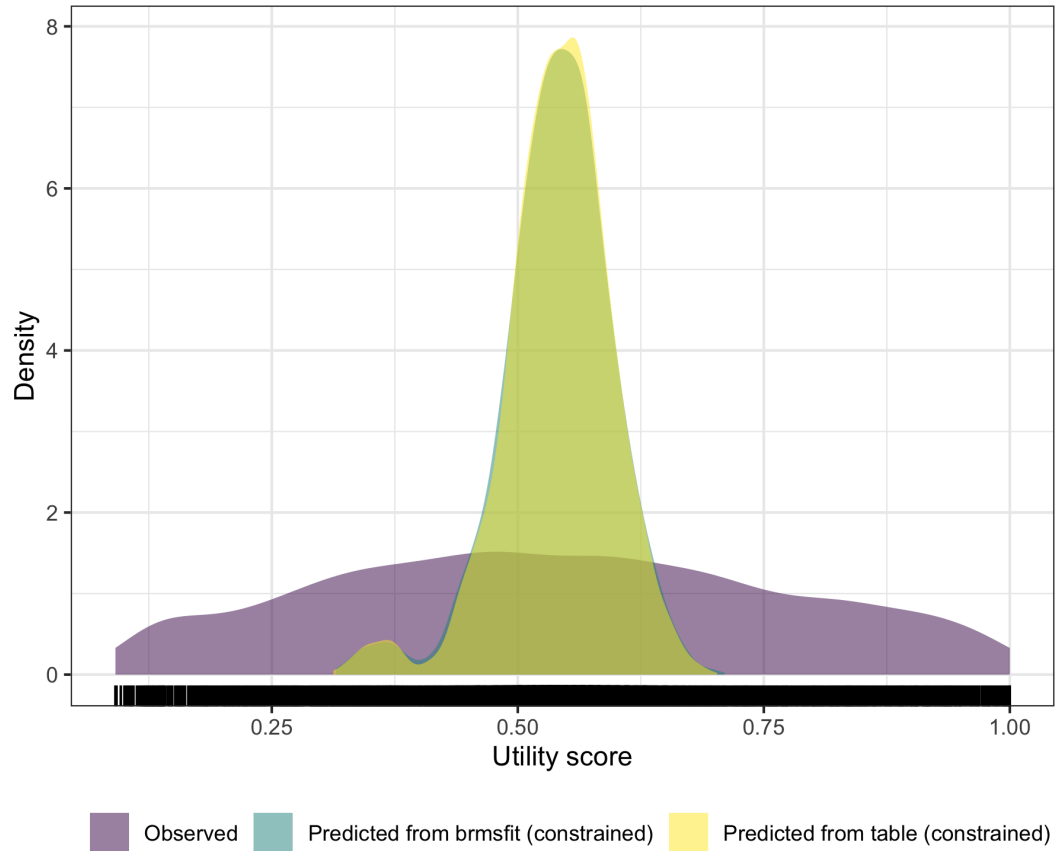


Figure 395: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

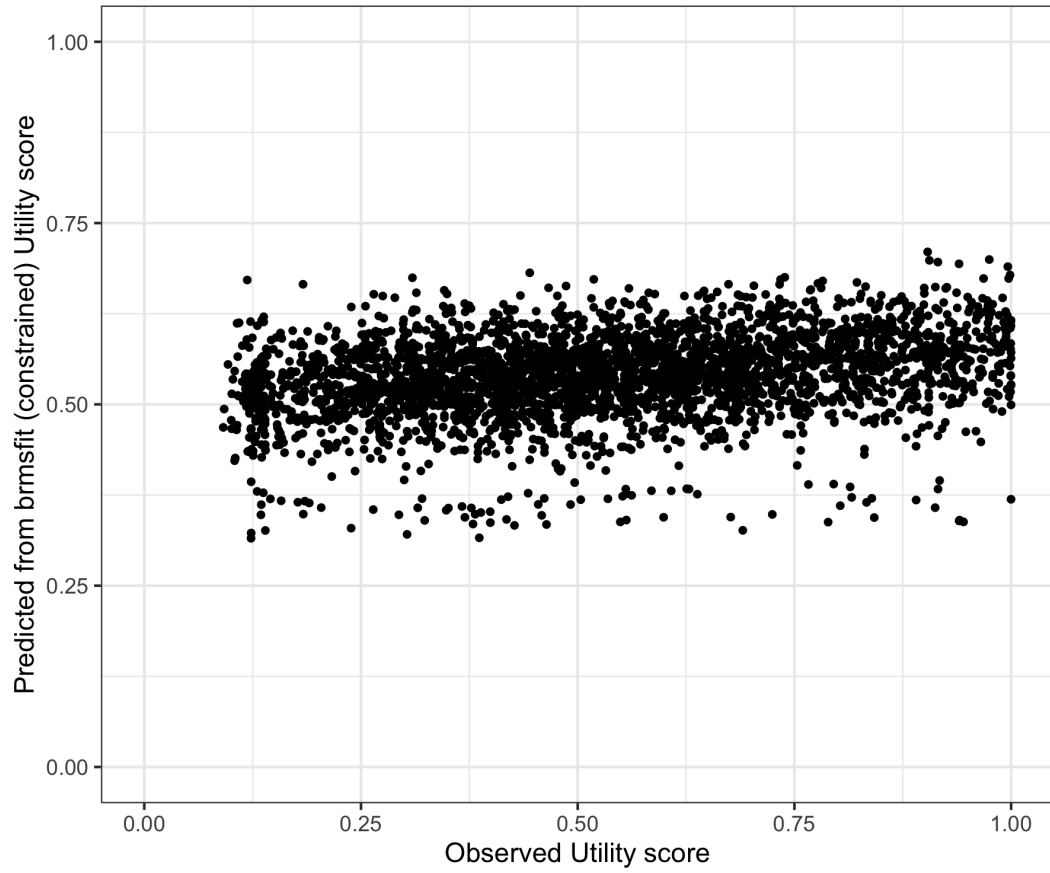


Figure 396: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

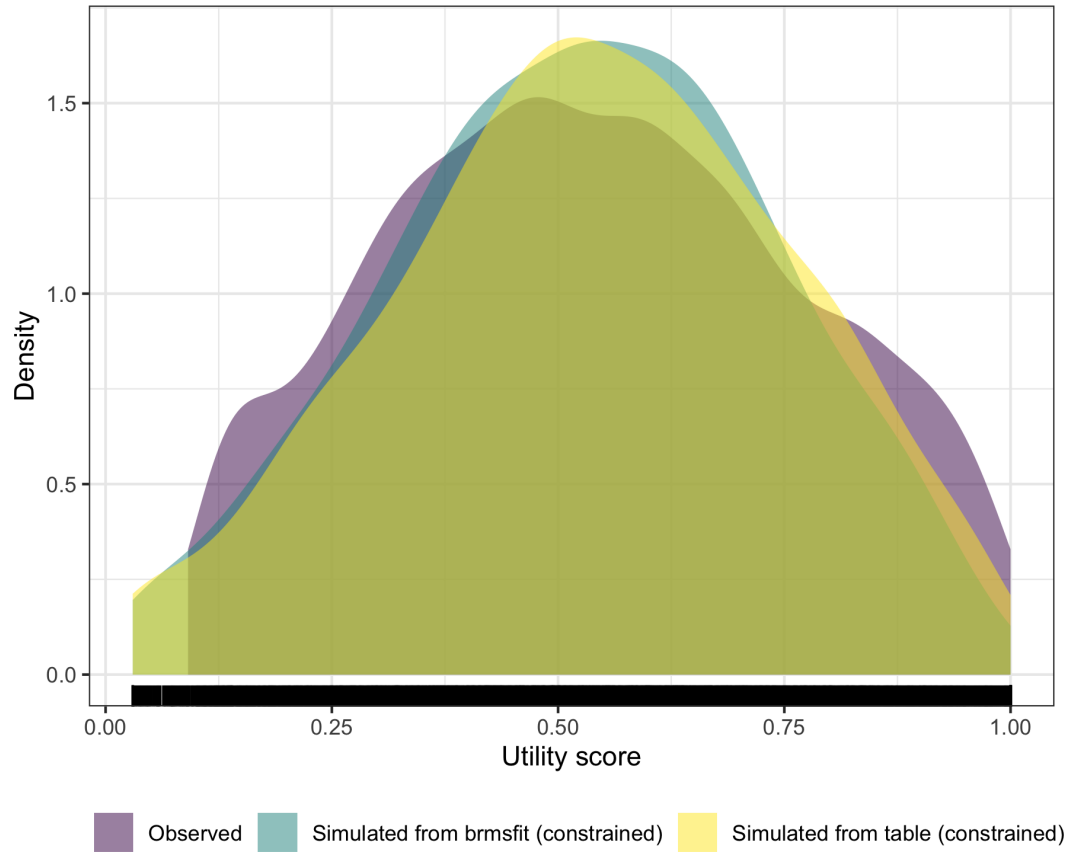


Figure 397: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

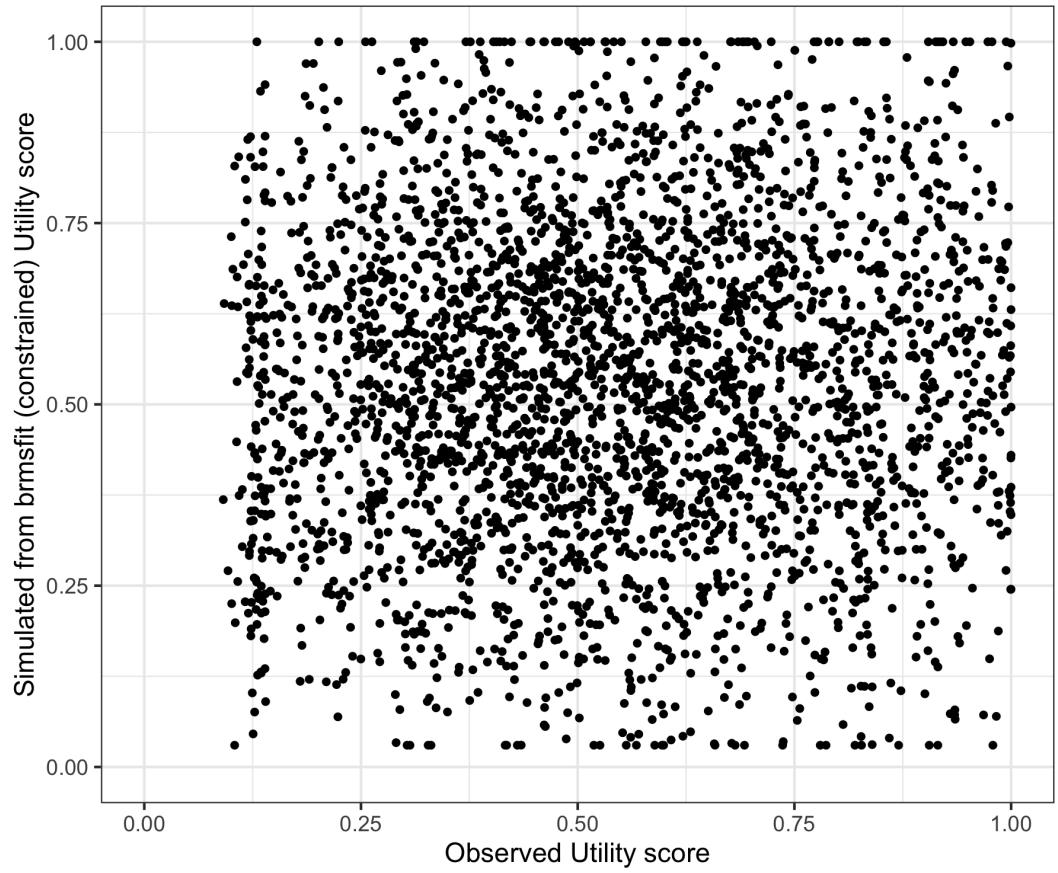


Figure 398: SOFAS with dage generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

42 SOFAS with dage linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - dage (age); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is SOFAS_dage_3_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more i

Warning: There were 426 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>

Table 83: SOFAS with dage linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3216)							
sd(Intercept)	0.44	0.22	0.04	0.76	1.52	7	20
Population-Level Effects:							
Intercept	-0.47	0.11	-0.67	-0.25	1.01	721	2 082
SOFAS_scaled	0.93	0.09	0.76	1.11	1.01	1 604	3 217
dage	-0.03	0.00	-0.04	-0.02	1.02	152	60
dstudyingworkingBoth	0.13	0.04	0.05	0.21	1.01	426	3 219
dstudyingworkingStudy	0.05	0.04	-0.02	0.13	1.01	463	2 933
dstudyingworkingWork	0.10	0.05	0.01	0.19	1.02	152	89
Family Specific Parameters:							
sigma	0.56	0.20	0.16	0.77	1.56	7	18

Formula: AQOL6D_CLL ~SOFAS_scaled + dage + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 84: SOFAS with dage linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.44	0.30	0.054 , 0.957
RMSE	1.10	0.05	1.054 , 1.144

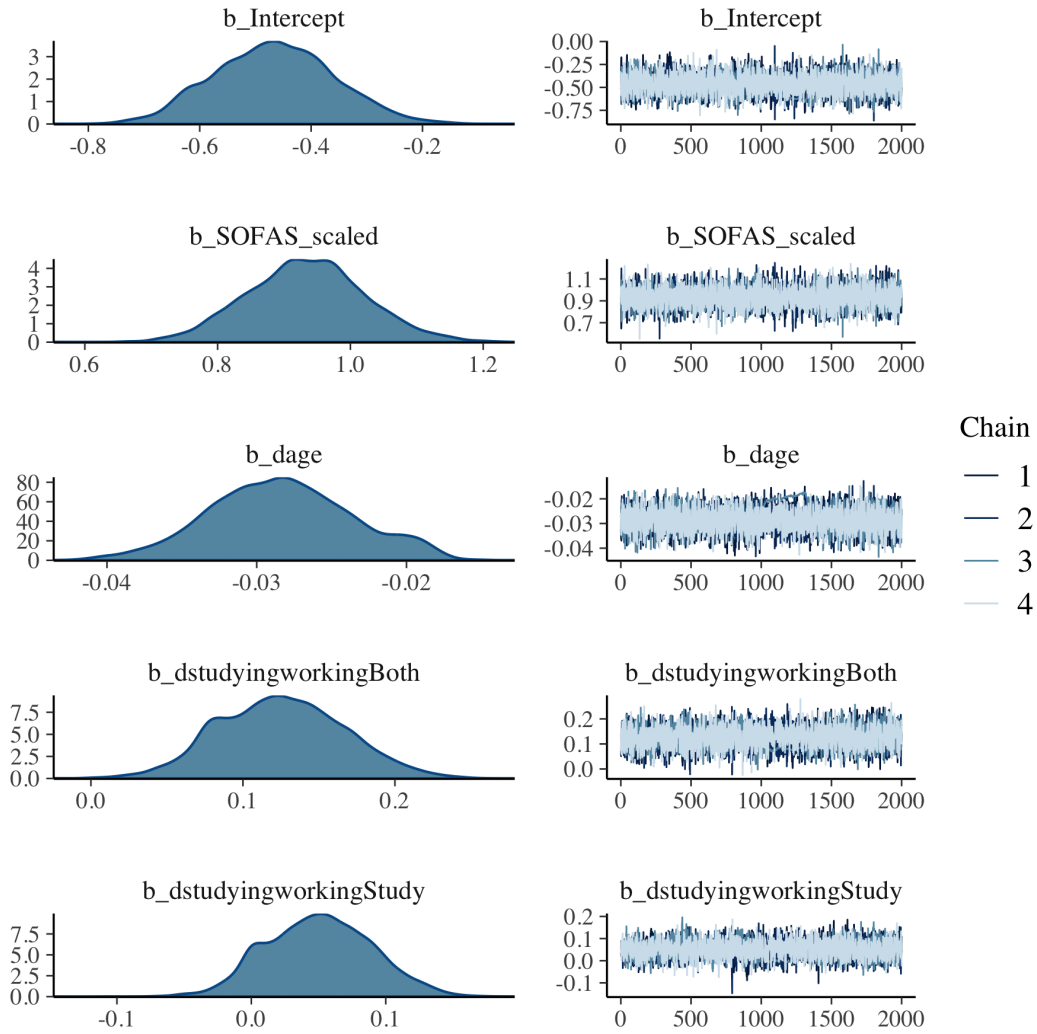


Figure 399: SOFAS with dage linear mixed model with complementary log log transformation population level effects

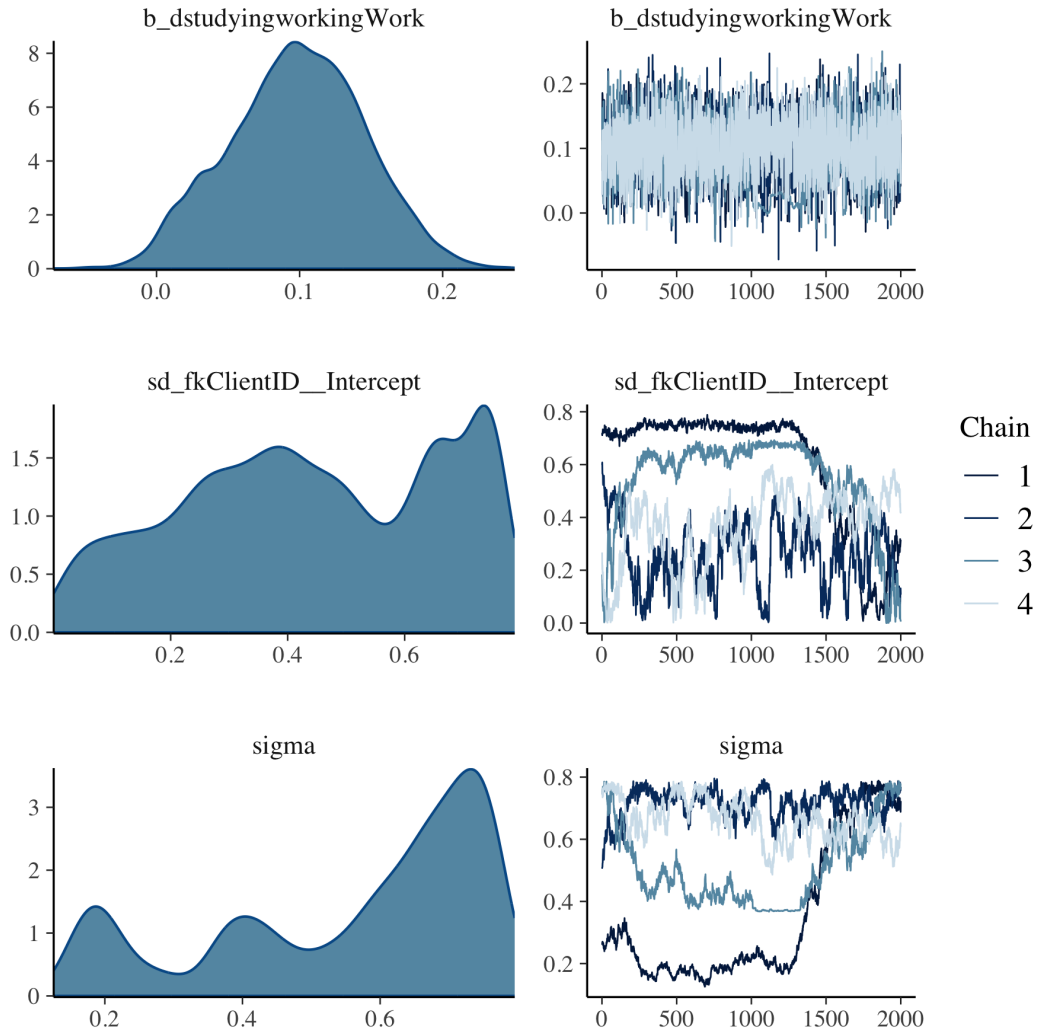


Figure 400: SOFAS with dage linear mixed model with complementary log log transformation group level effects

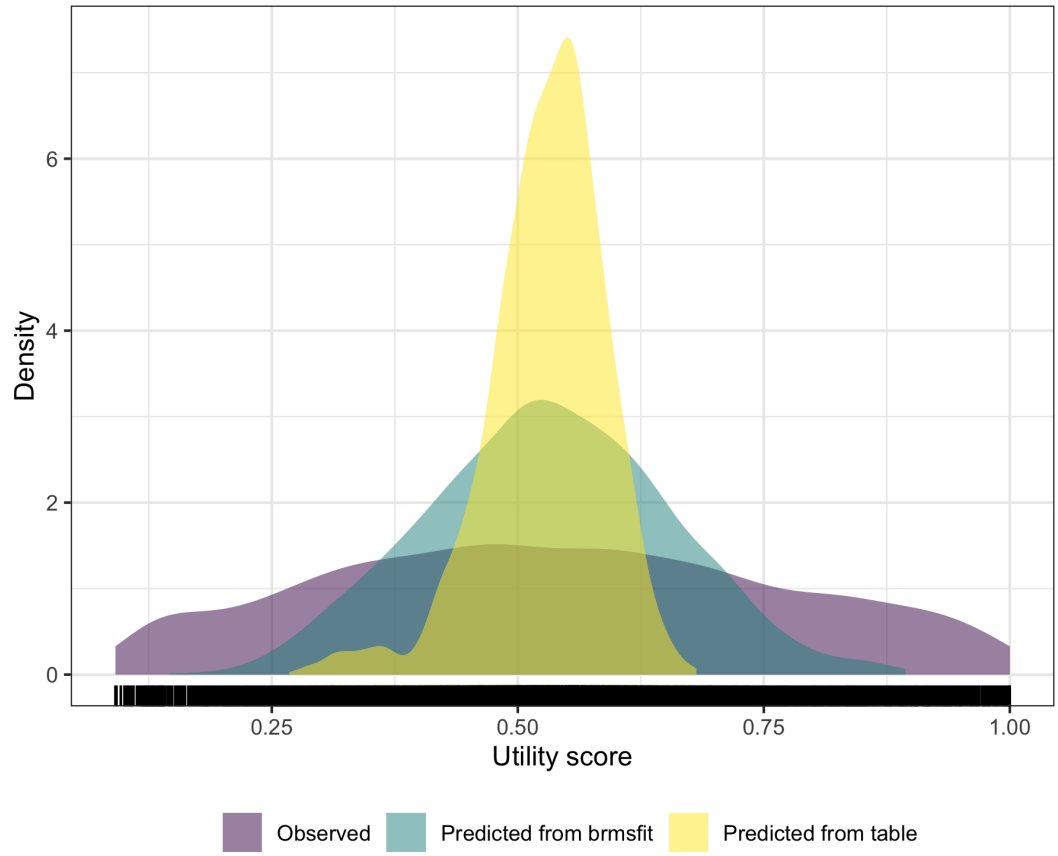


Figure 401: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

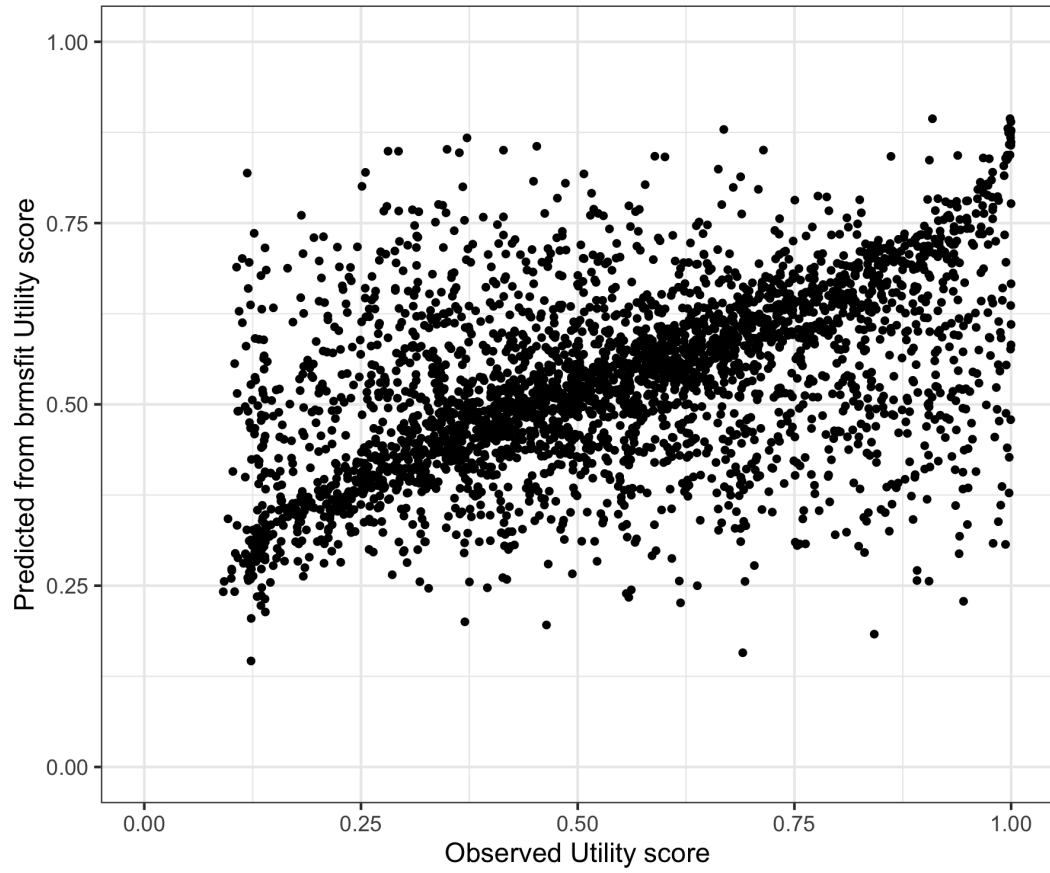


Figure 402: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

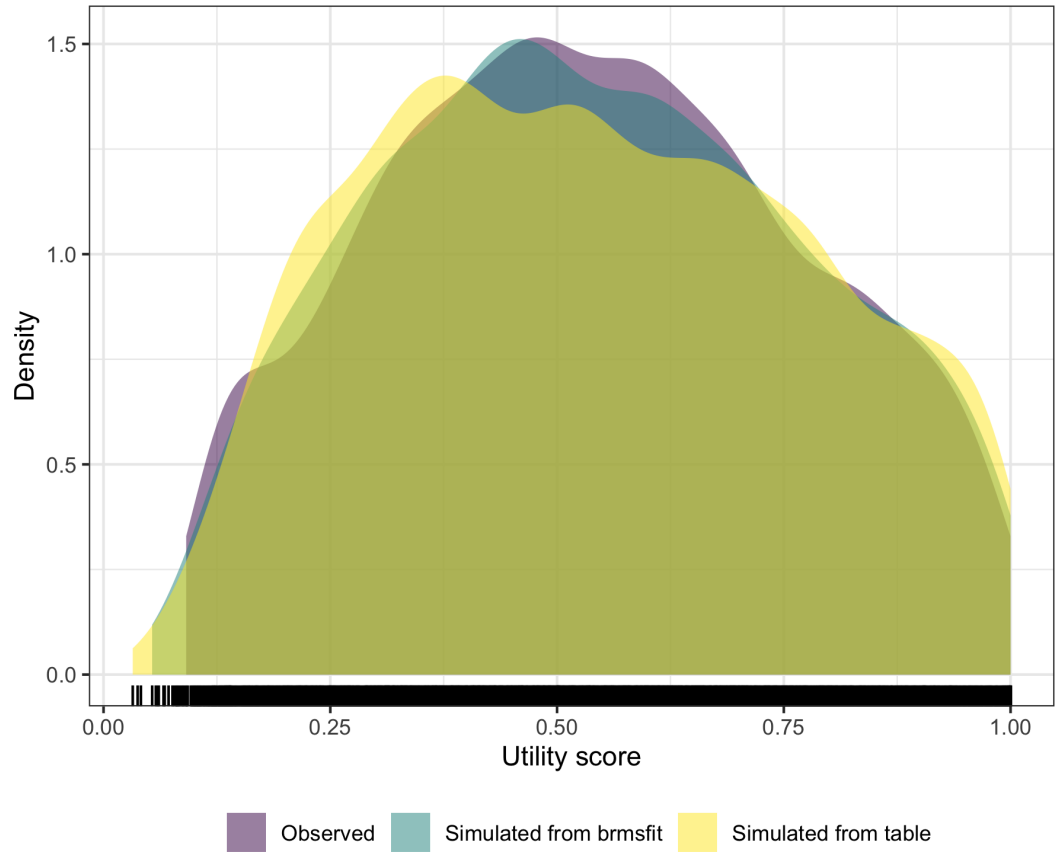


Figure 403: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

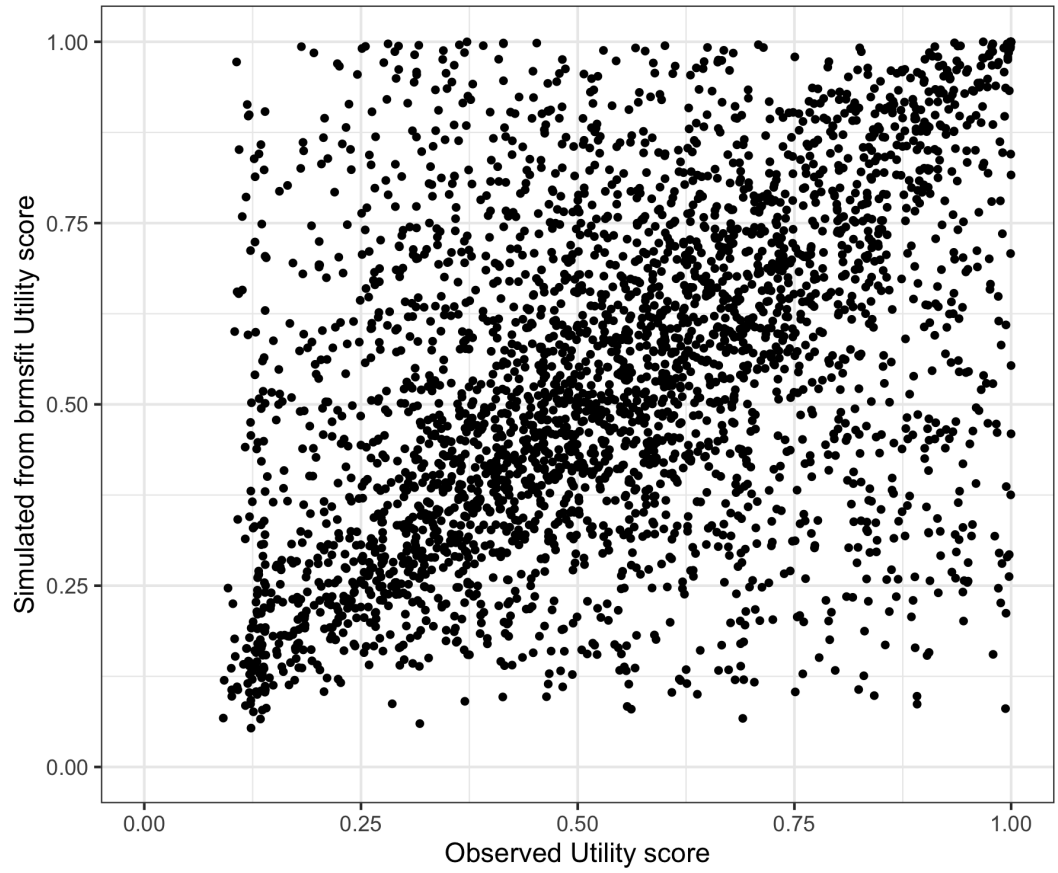


Figure 404: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

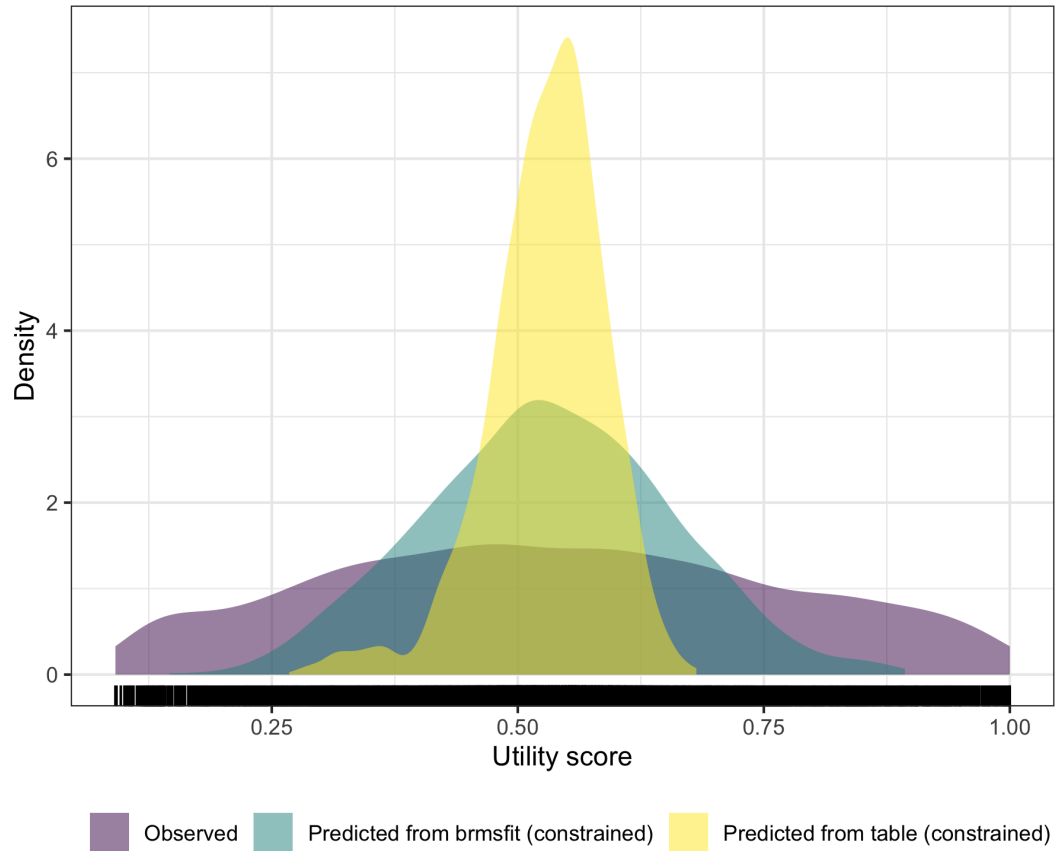


Figure 405: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

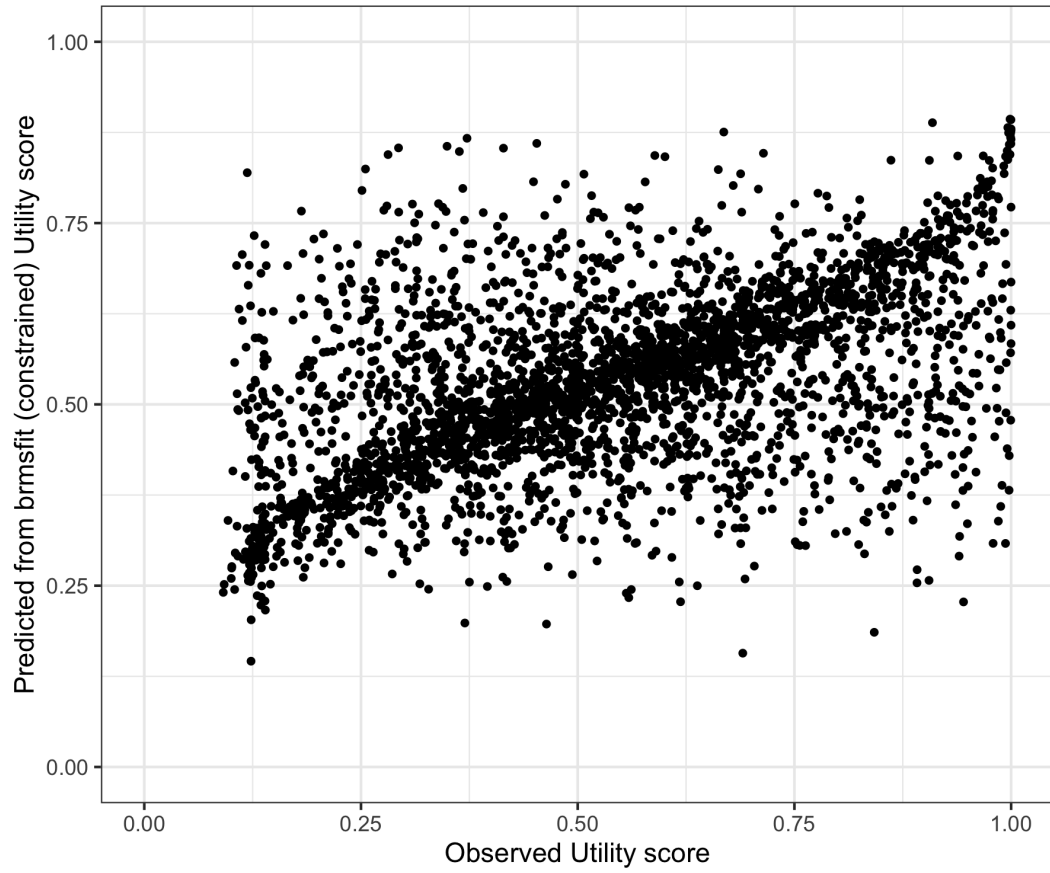


Figure 406: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

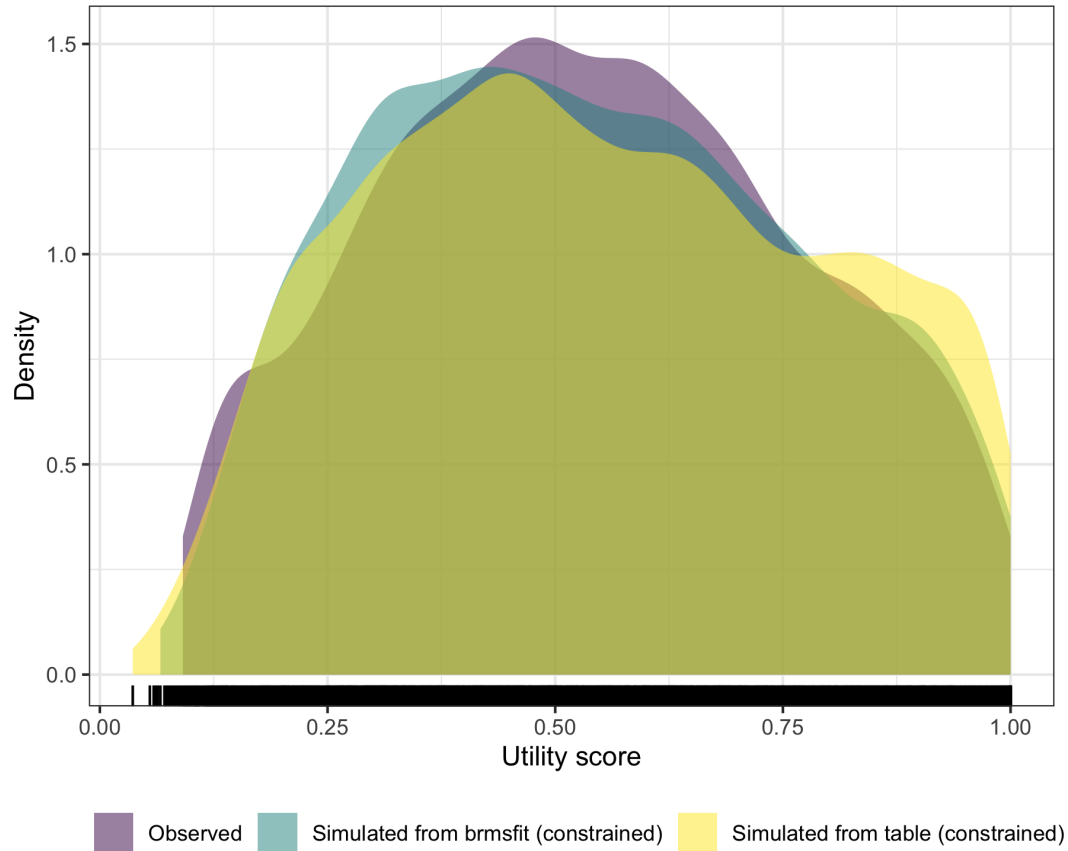


Figure 407: SOFAS with dage linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

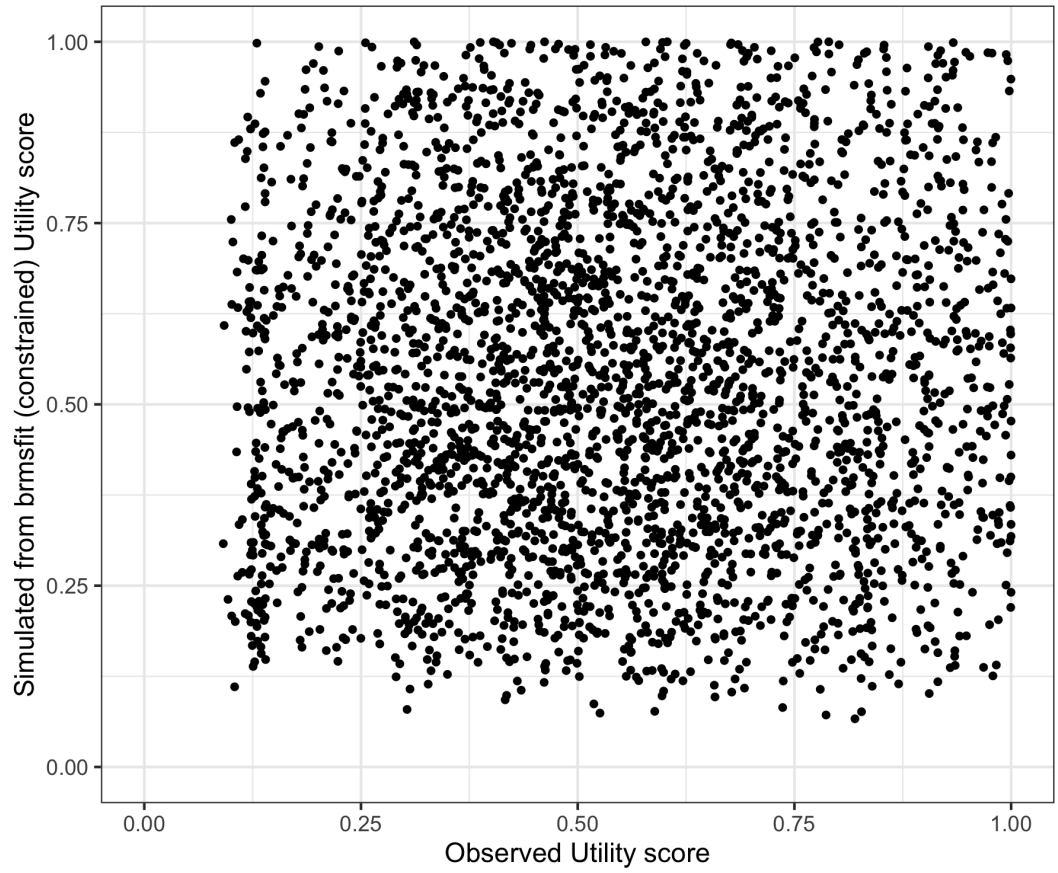


Figure 408: SOFAS with dage linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

43 SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - dgenderMale (); - dgenderOther (); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is SOFAS_dgender_2_GLM_GSN_LOG.

Warning: There were 3 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>

Table 85: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3216)							
sd(Intercept)	0.07	0.04	0.00	0.16	1.00	248	447
Population-Level Effects:							
Intercept	-1.12	0.04	-1.20	-1.04	1.00	12 785	5 958
SOFAS_scaled	0.62	0.06	0.50	0.73	1.00	10 243	6 109
dgenderMale	0.12	0.02	0.09	0.15	1.00	11 064	5 492
dgenderOther	-0.11	0.06	-0.24	-0.00	1.00	13 115	5 146
dstudyingworkingBoth	0.08	0.02	0.03	0.12	1.00	6 314	5 979
dstudyingworkingStudy	0.08	0.02	0.04	0.12	1.00	6 498	5 748
dstudyingworkingWork	0.03	0.02	-0.02	0.08	1.00	6 162	5 072
Family Specific Parameters:							
sigma	0.22	0.01	0.20	0.23	1.00	337	495

Formula: AQOL6D ~SOFAS_scaled + dgender + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = log; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 86: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.10	0.04	0.06 , 0.209
RMSE	0.31	0.01	0.304 , 0.313

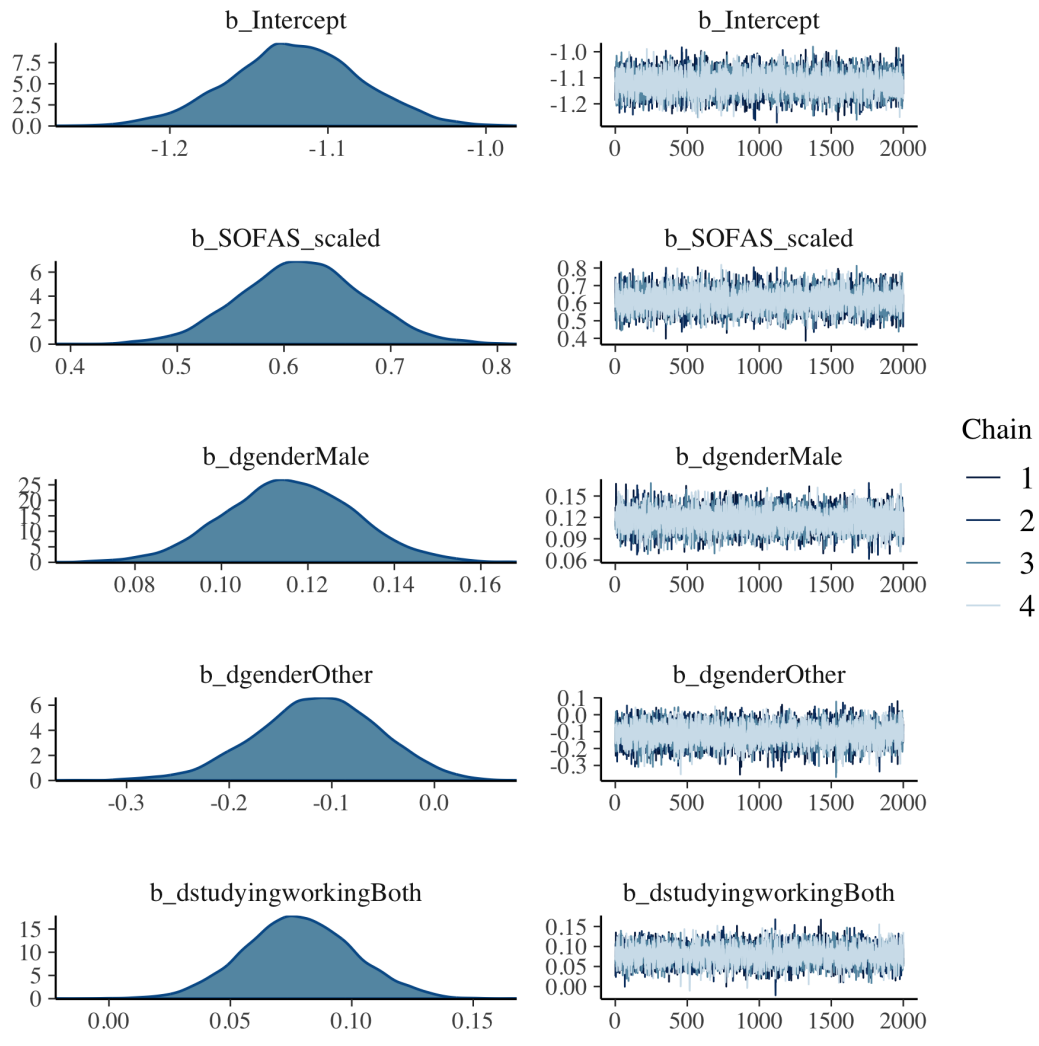


Figure 409: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link population level effects

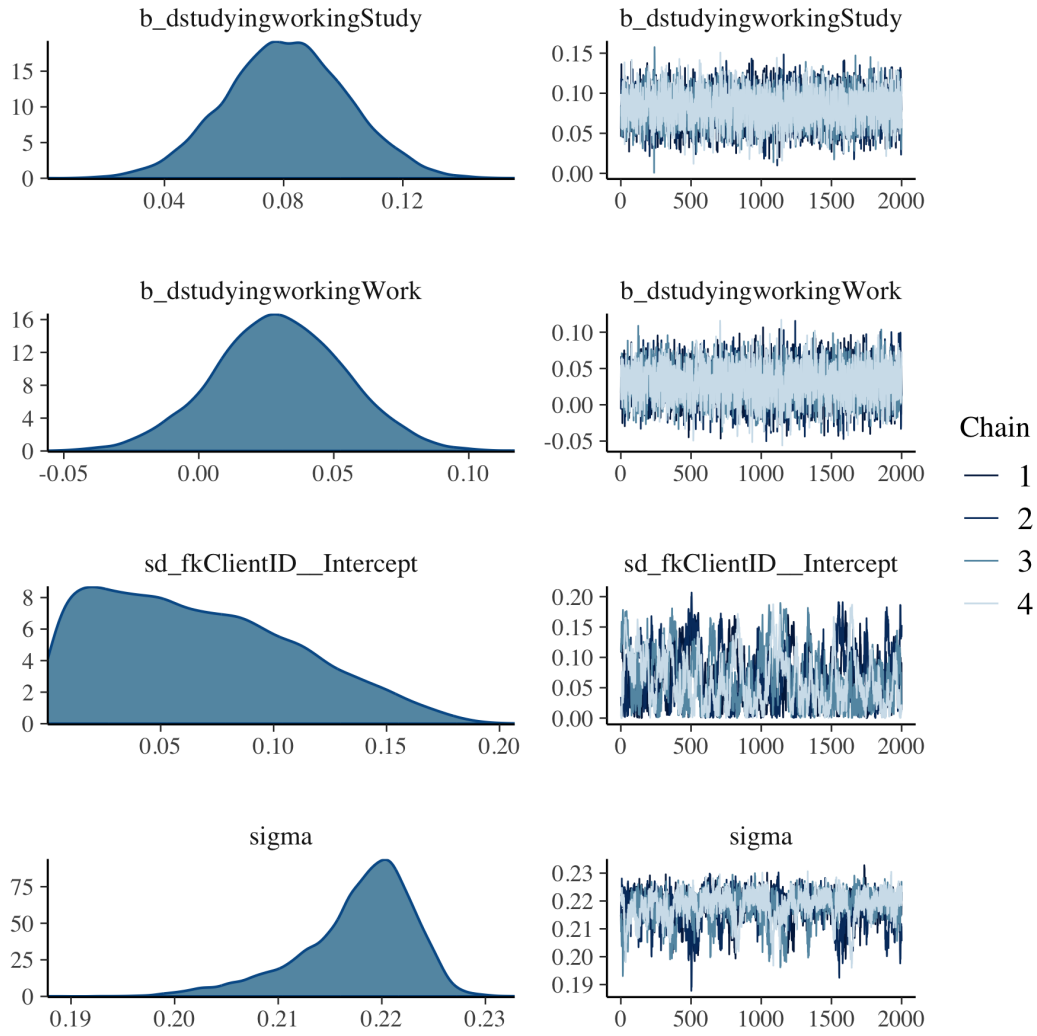


Figure 410: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link group level effects

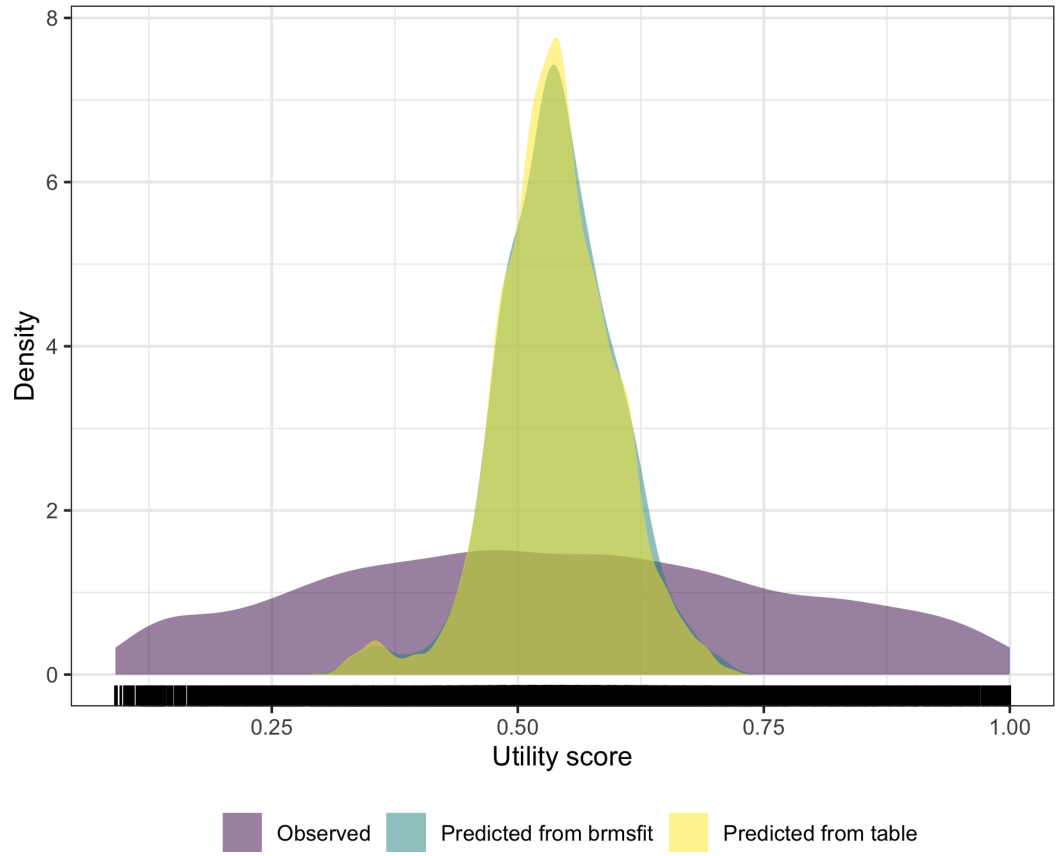


Figure 411: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values

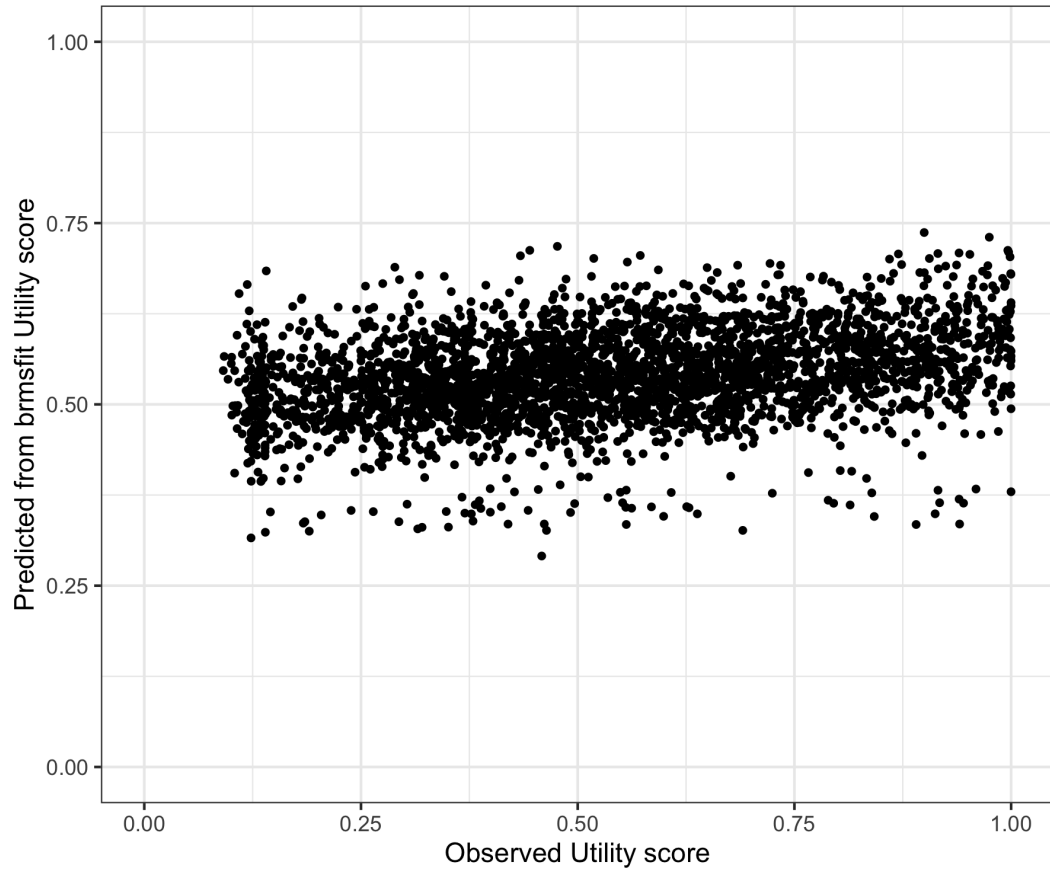


Figure 412: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values

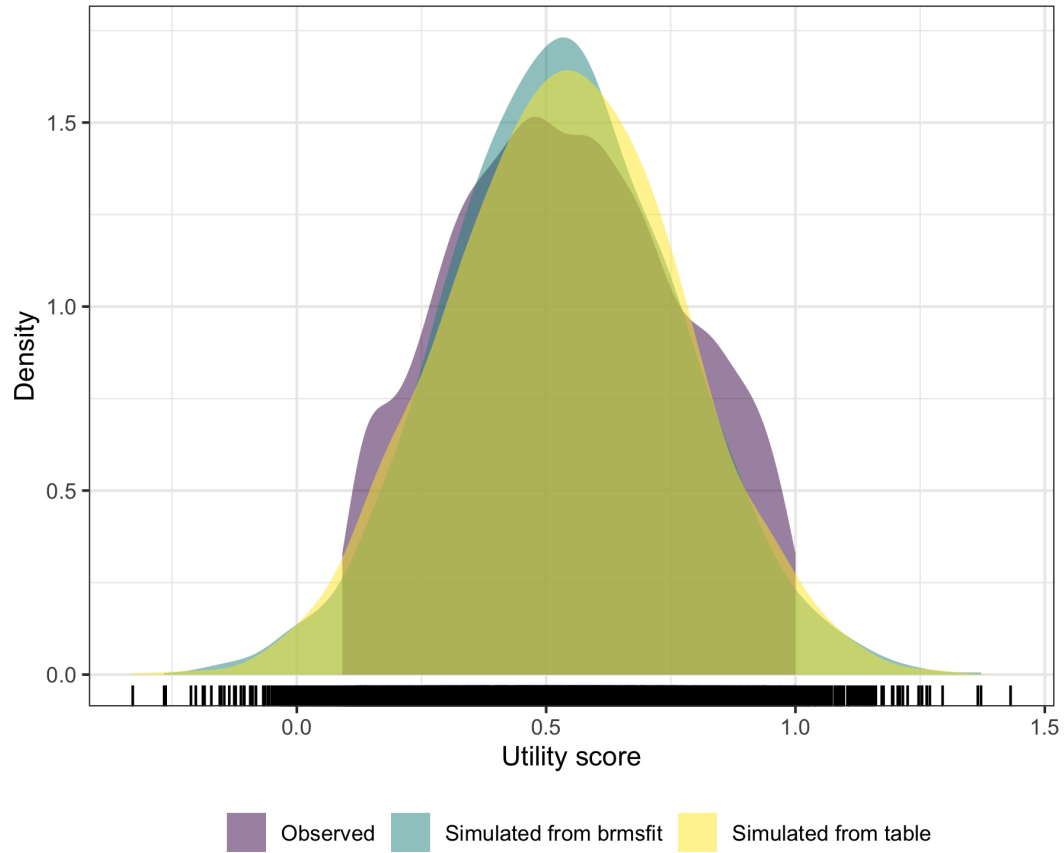


Figure 413: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values

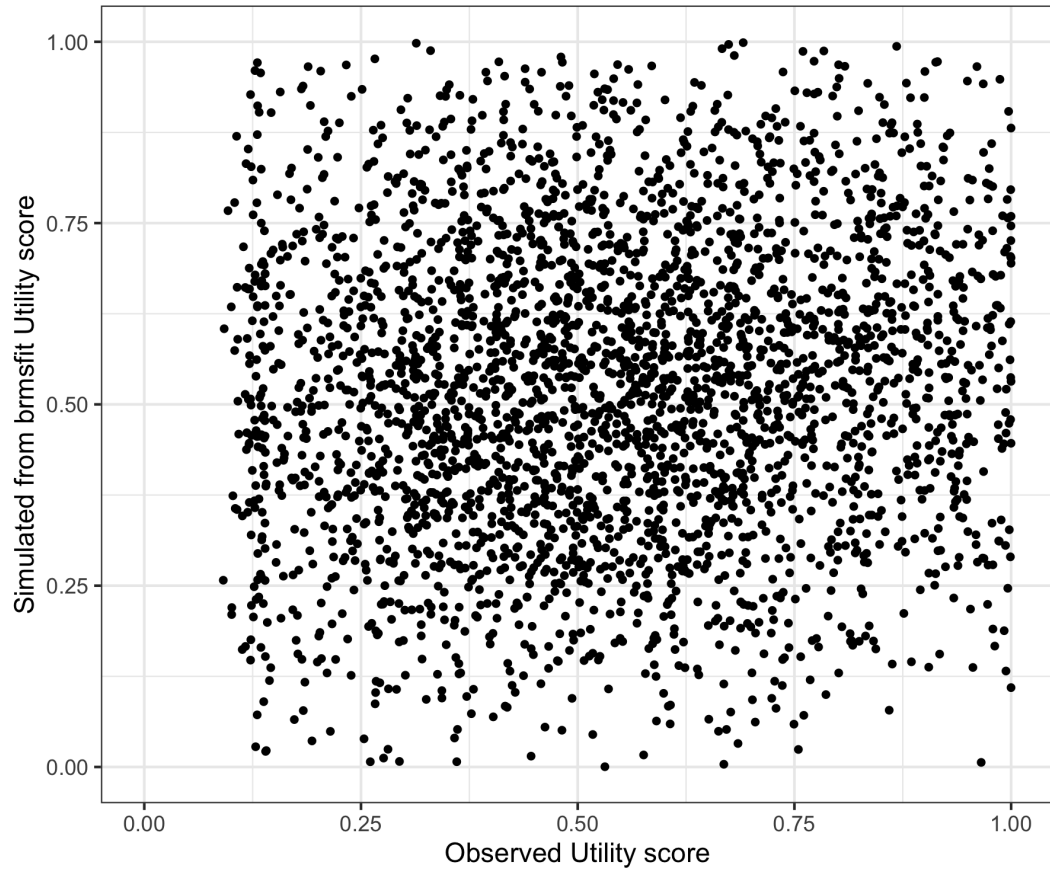


Figure 414: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values

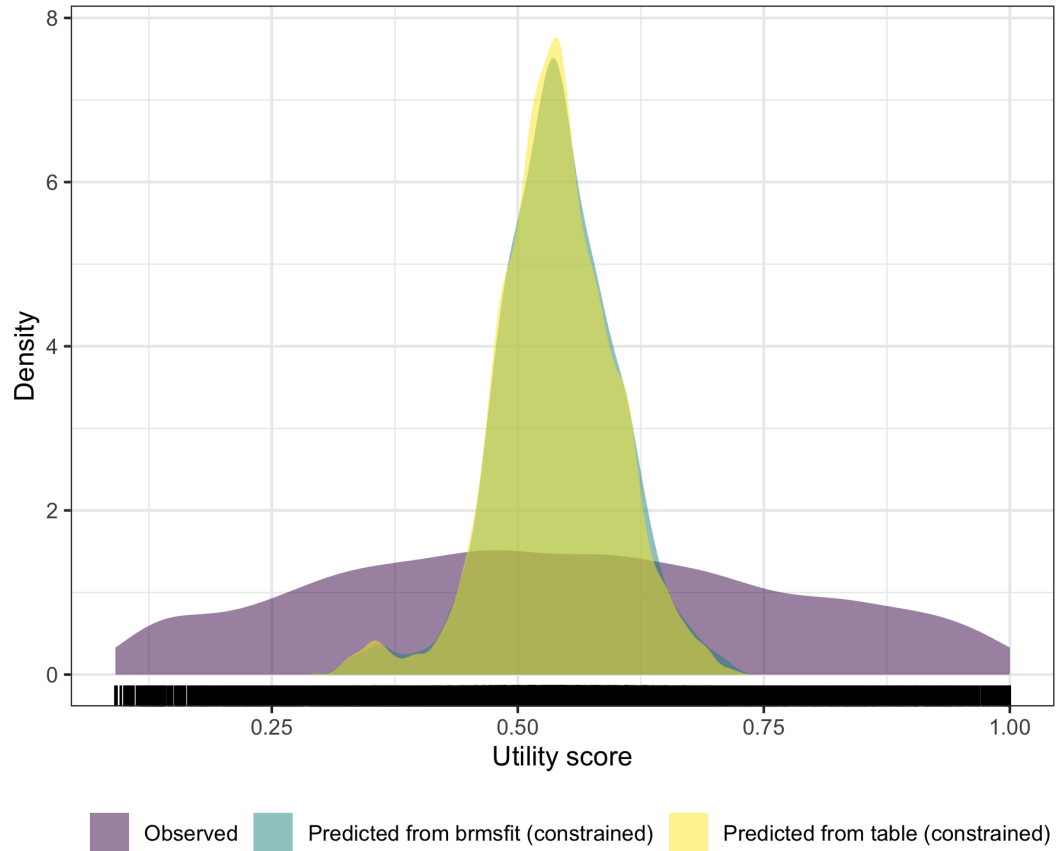


Figure 415: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

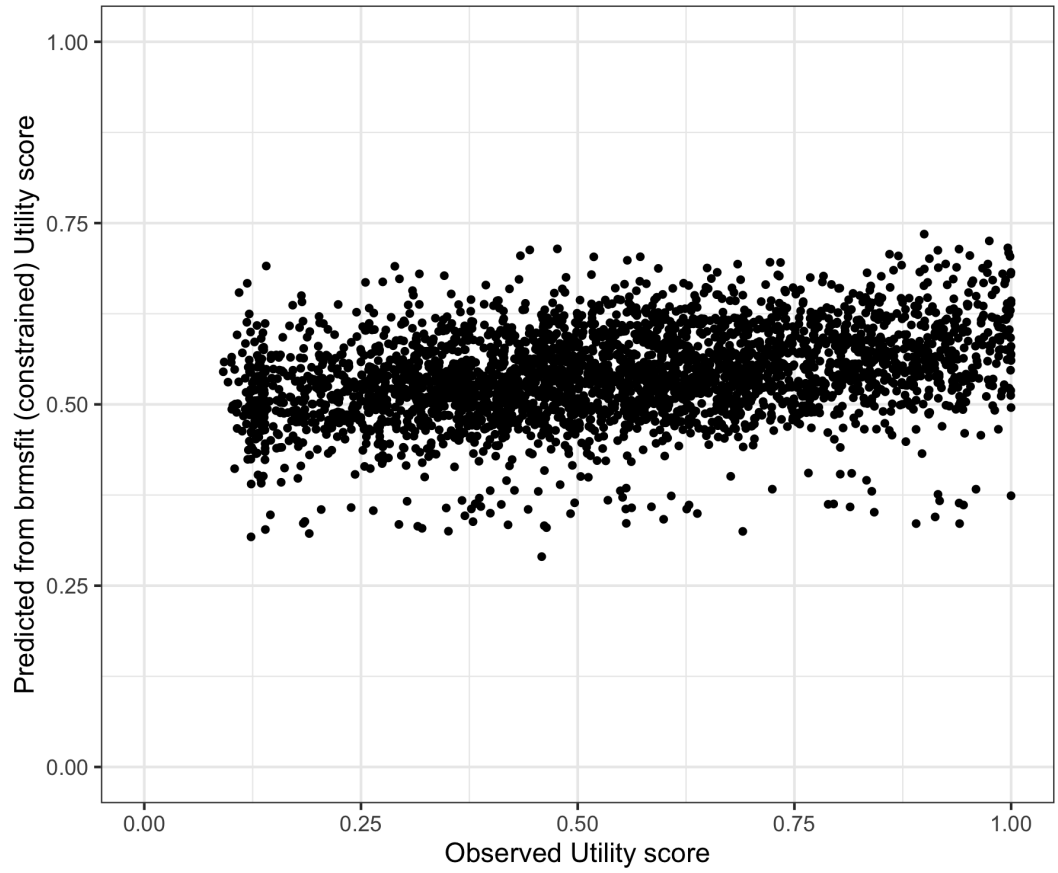


Figure 416: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

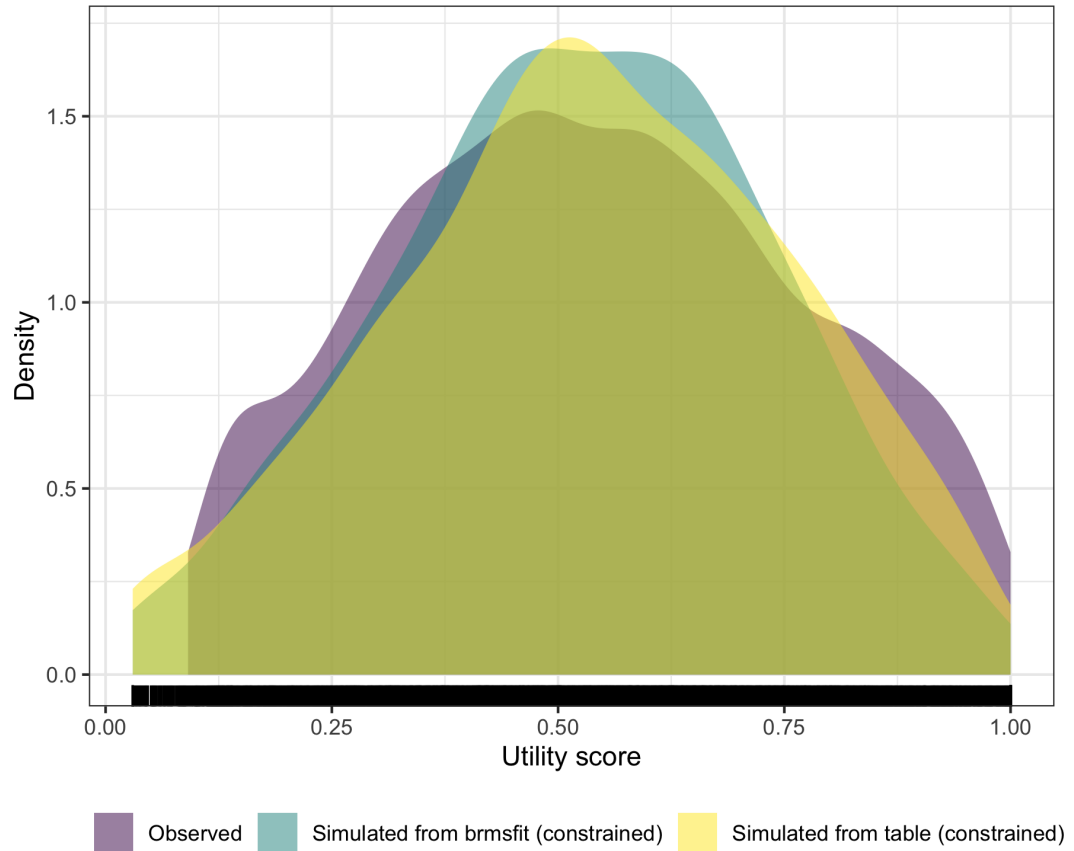


Figure 417: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

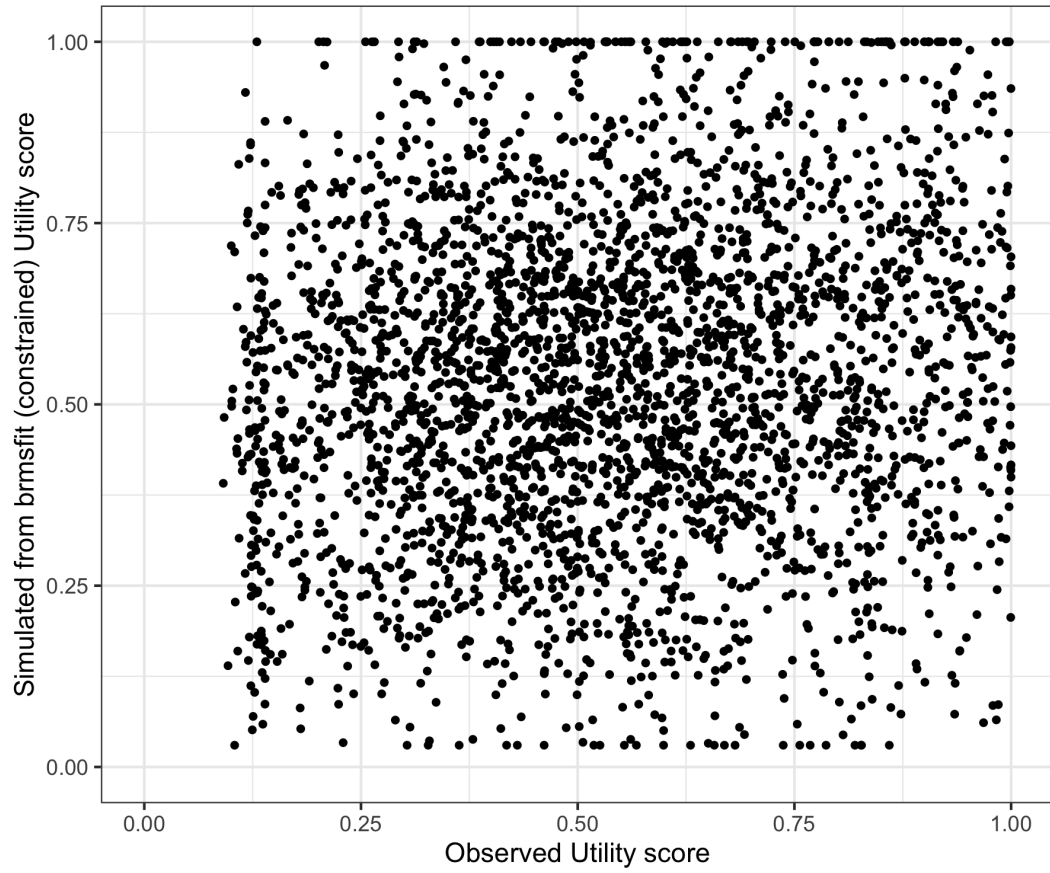


Figure 418: SOFAS with dgender generalised linear mixed model with Gaussian distribution and log link comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

44 SOFAS with dgender linear mixed model with complementary log log transformation

This model predicts values at two timepoints for AQOL-6D (weighted total). The predictor variables are baseline values and subsequent changes in - SOFAS (Social and Occupational Functioning Assessment Scale (multiplied by 0.01)); - dgenderMale (); - dgenderOther (); - dstudyingworkingBoth (); - dstudyingworkingStudy (); and - dstudyingworkingWork (). The catalogue reference for this model is SOFAS_dgender_2_OLS_CLL.

Warning: Parts of the model have not converged (some Rhats are > 1.05). Be careful when analysing the results! We recommend running more iterations.

Warning: There were 24 divergent transitions after warmup. Increasing adapt_delta above 0.99 may help. See <http://mc-stan.org/misc/warnings>.

Table 87: SOFAS with dgender linear mixed model with complementary log log transformation

Parameter	Estimate	Est.Error	l-95% CI	u-95% CI	Rhat	Bulk_ESS	Tail_ESS
Group-Level Effects:							
fkClientID (Number of levels: 3216)							
sd(Intercept)	0.48	0.21	0.03	0.72	1.73	6	18
Population-Level Effects:							
Intercept	-1.09	0.07	-1.22	-0.96	1.00	3 517	4 808
SOFAS_scaled	0.94	0.09	0.76	1.12	1.00	3 115	4 591
dgenderMale	0.22	0.03	0.17	0.28	1.00	3 542	4 693
dgenderOther	-0.20	0.10	-0.39	-0.01	1.00	3 505	4 247
dstudyingworkingBoth	0.16	0.04	0.08	0.24	1.00	2 807	4 152
dstudyingworkingStudy	0.15	0.04	0.08	0.22	1.00	3 180	4 621
dstudyingworkingWork	0.07	0.04	-0.01	0.16	1.00	3 175	4 601
Family Specific Parameters:							
sigma	0.54	0.16	0.27	0.77	1.74	6	17

Formula: AQOL6D_CLL ~SOFAS_scaled + dgender + dstudyingworking + (1 | fkClientID)

Family: gaussian

Links: mu = identity; sigma = identity

Data: NULL (Number of observations: 3210)

Draws: 4 chains, each with iter = 4000; warmup = 2000; thin = 1;

total post-warmup draws = 8000

Draws were sampled using sample(hmc). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

Table 88: SOFAS with dgender linear mixed model with complementary log log transformation model performance parameters

Parameter*	Estimate	SE	95CI
R2	0.50	0.27	0.061 , 0.886
RMSE	1.09	0.04	1.054 , 1.137

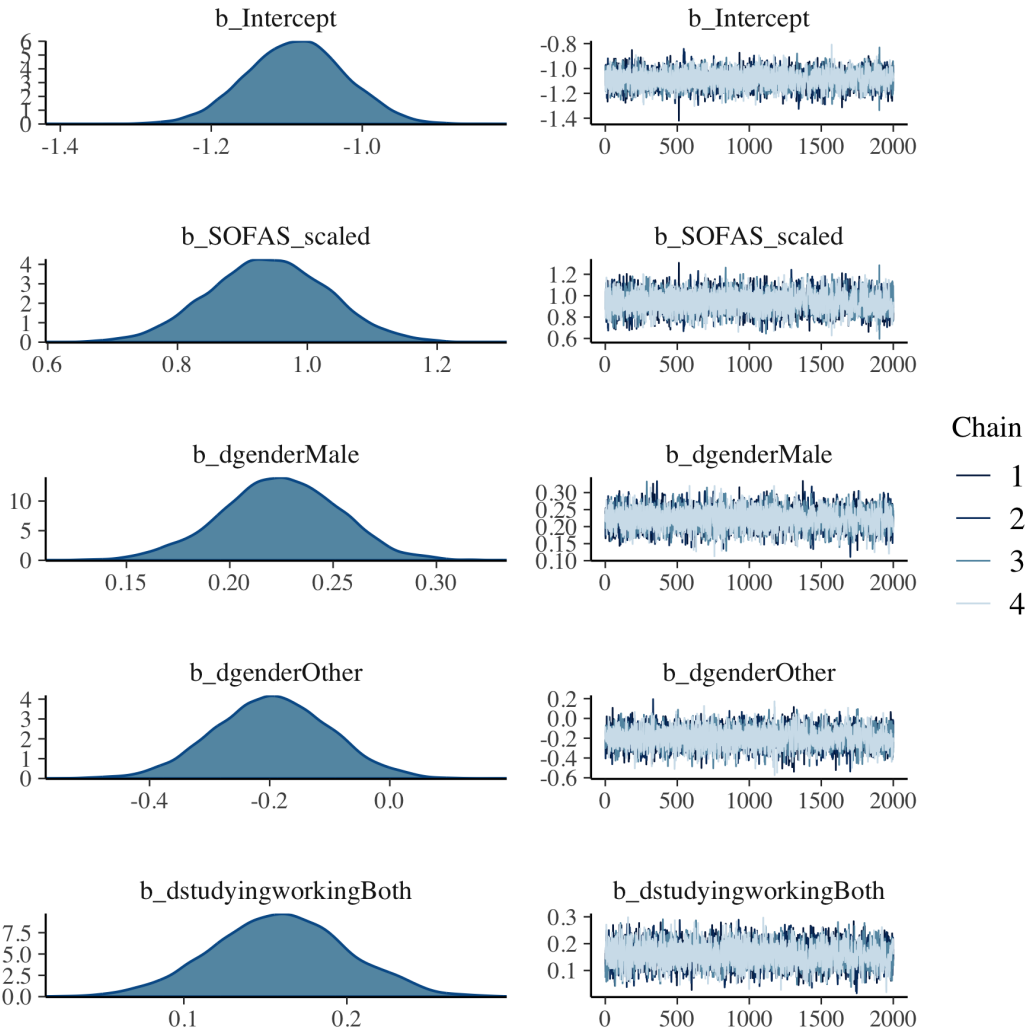


Figure 419: SOFAS with dgender linear mixed model with complementary log log transformation population level effects

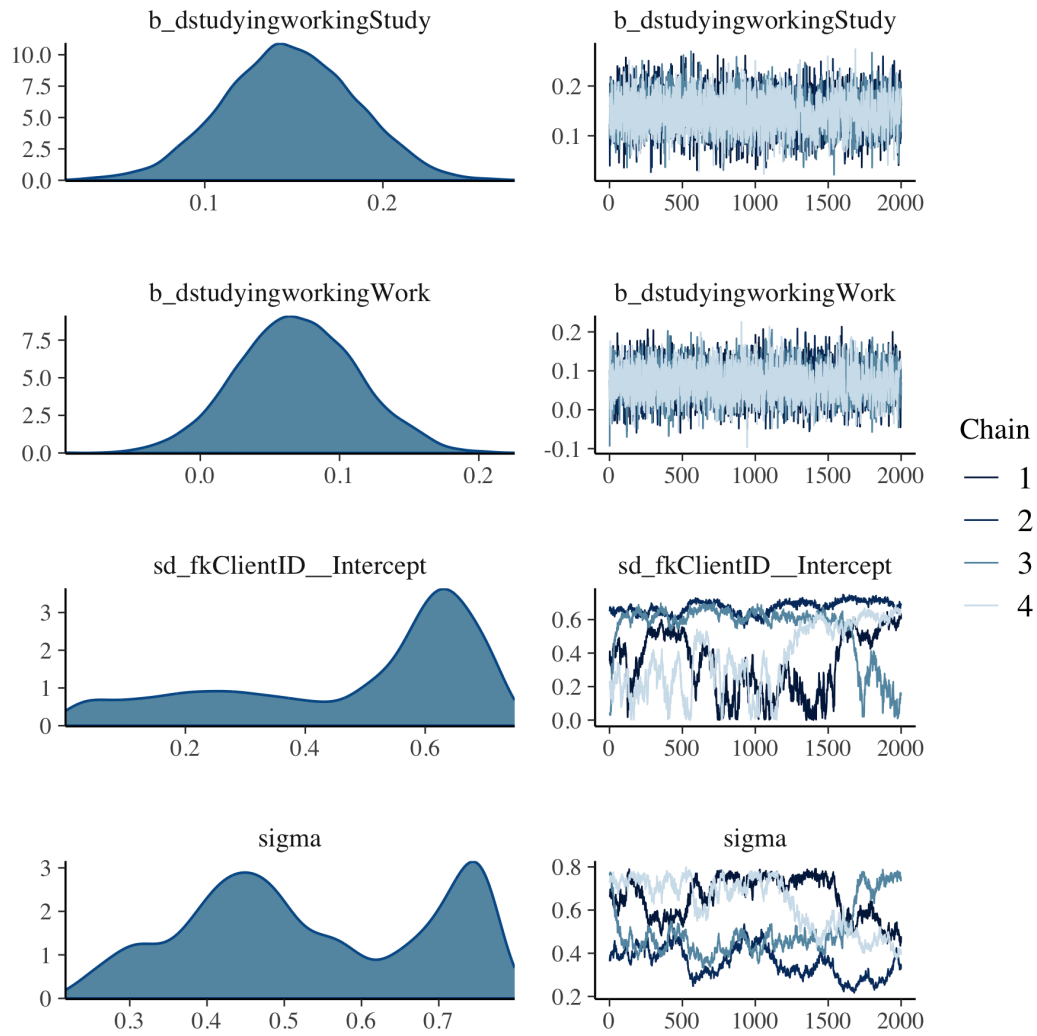


Figure 420: SOFAS with dggender linear mixed model with complementary log log transformation group level effects

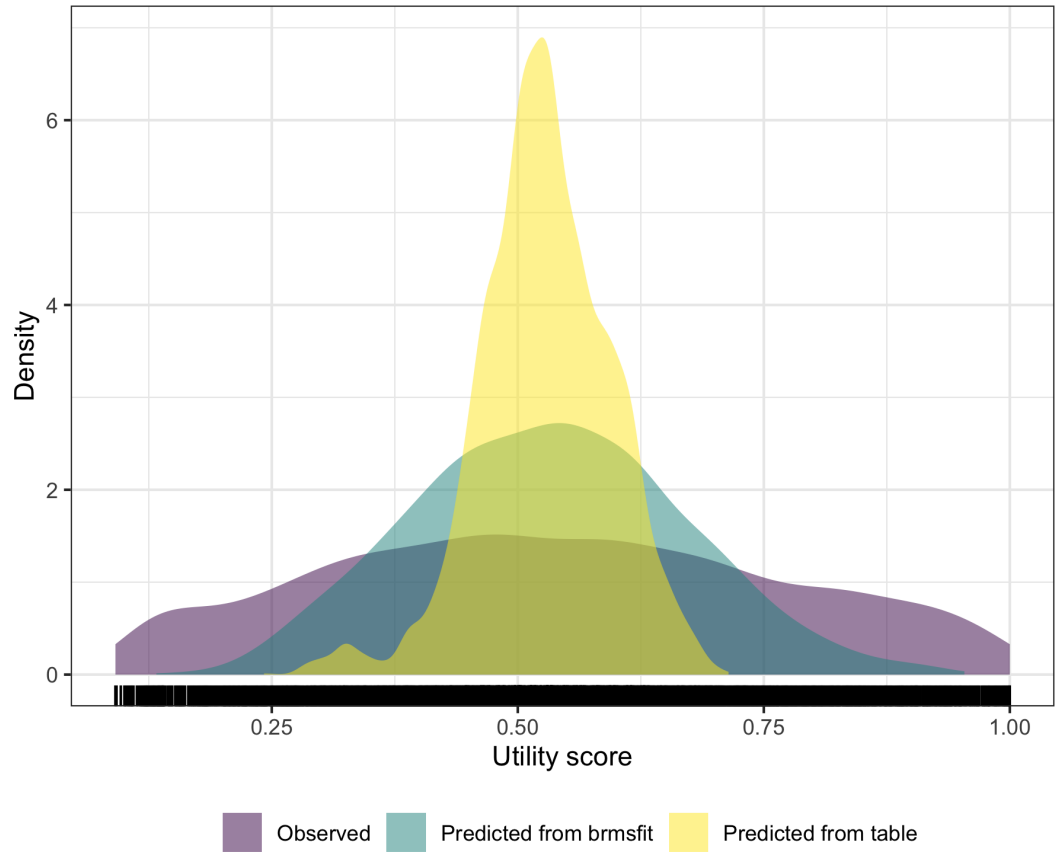


Figure 421: SOFAS with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values

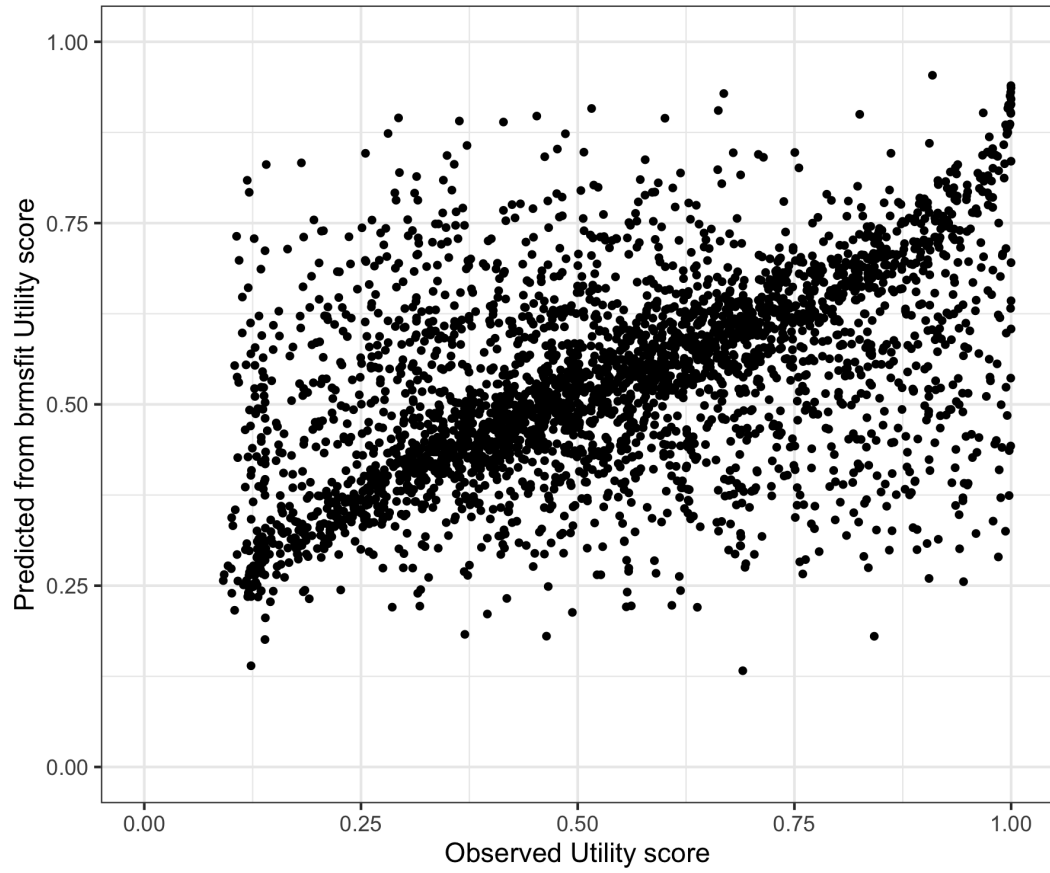


Figure 422: SOFAS with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values

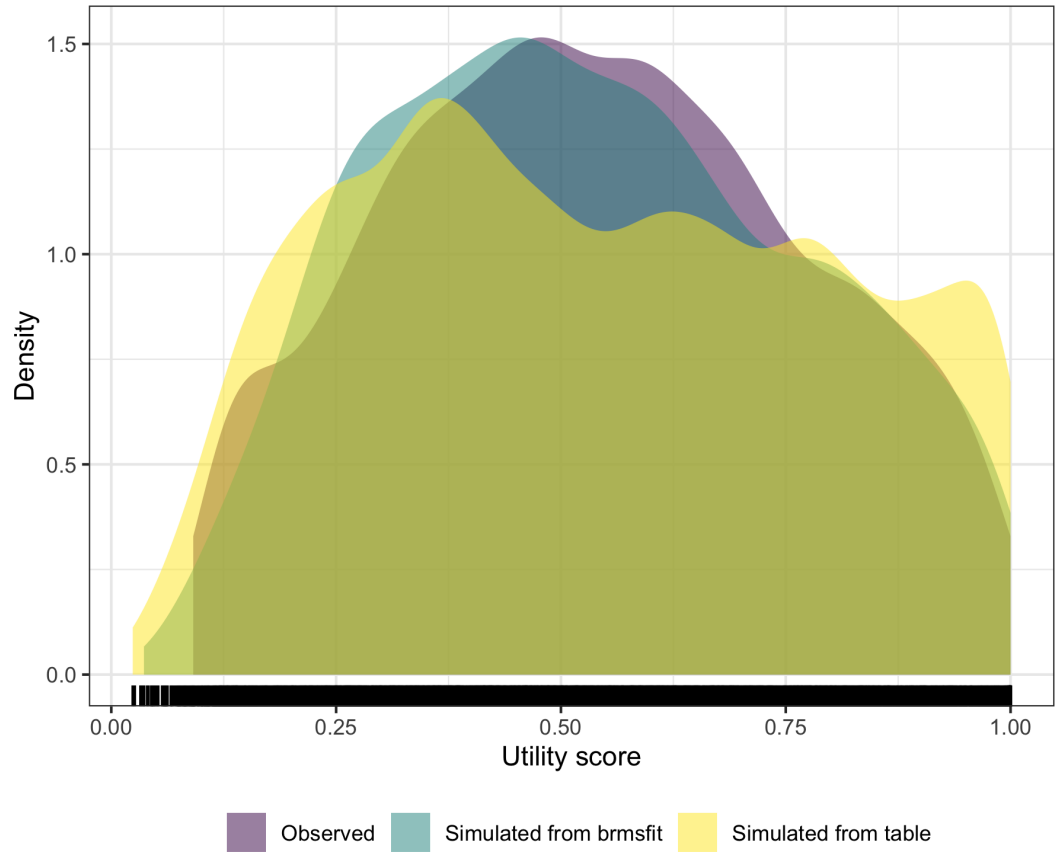


Figure 423: SOFAS with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values

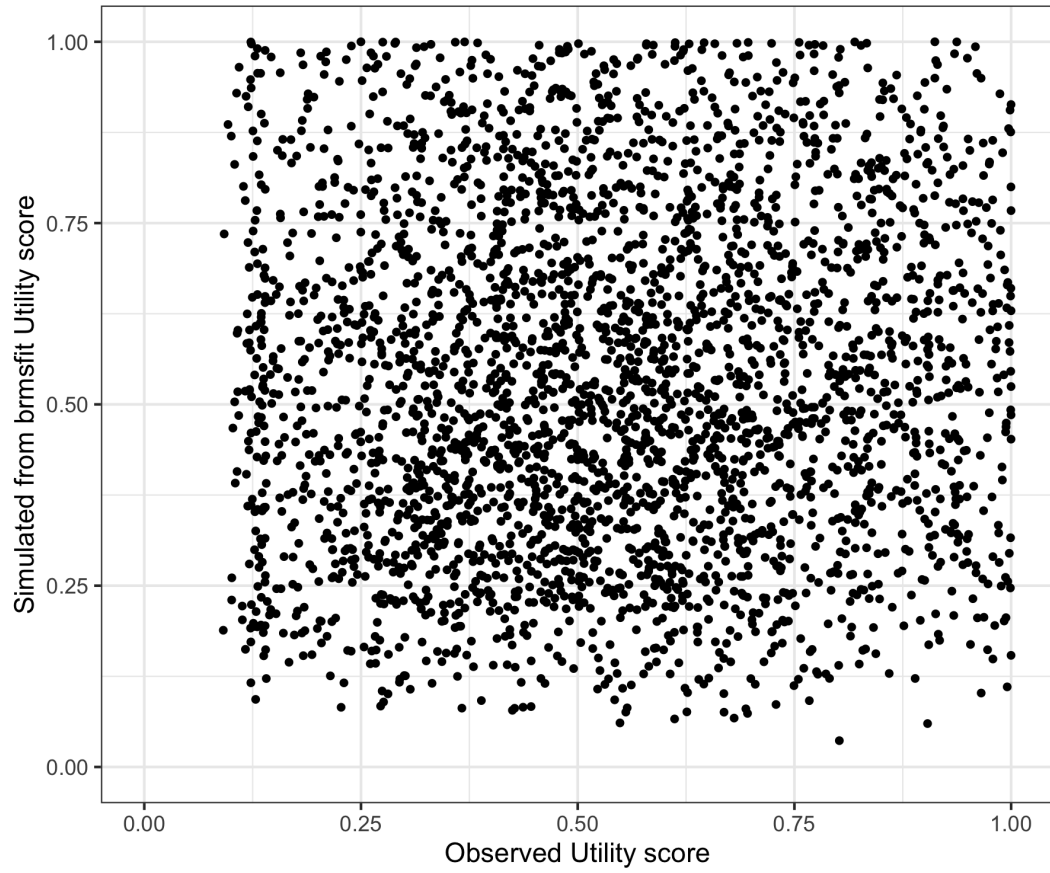


Figure 424: SOFAS with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values

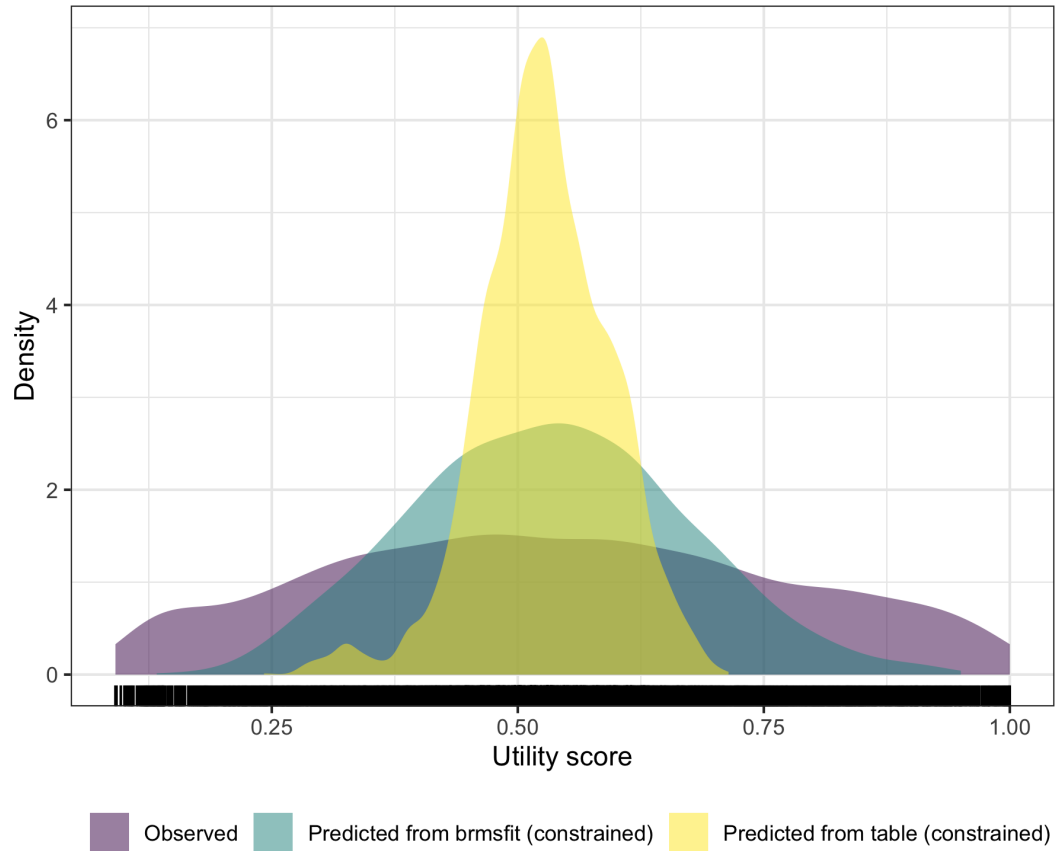


Figure 425: SOFAS with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

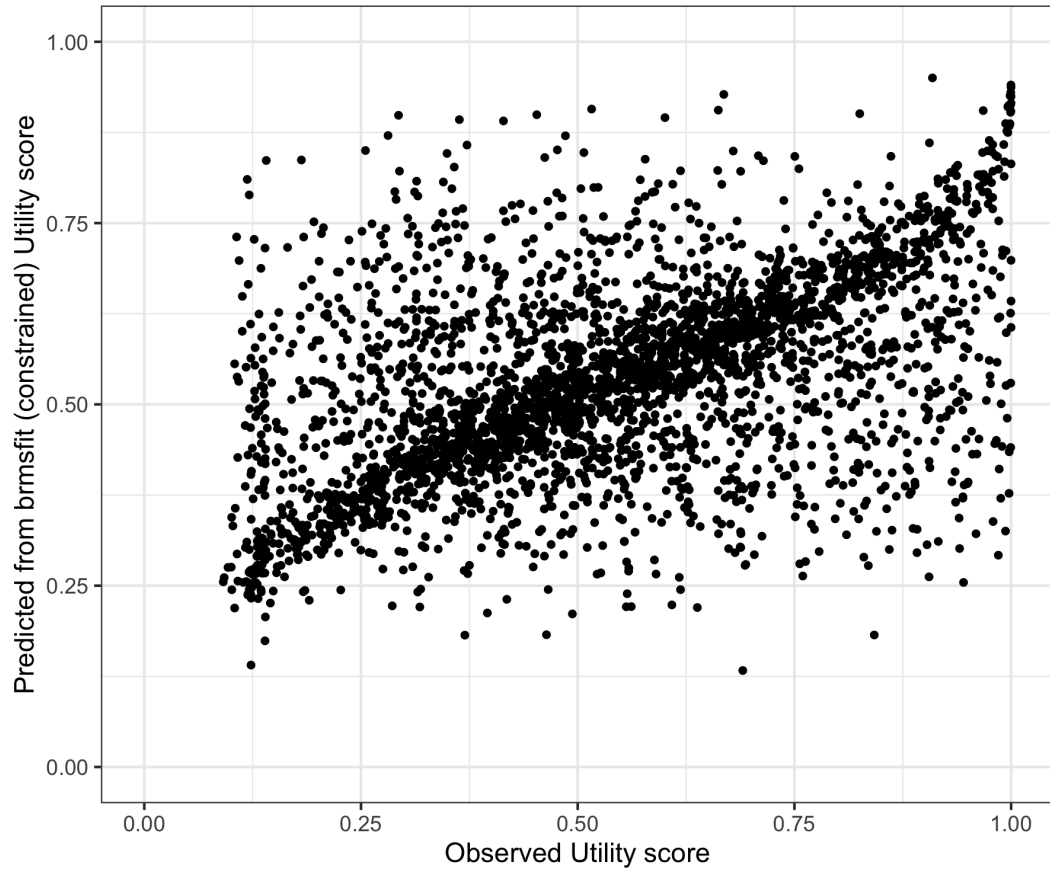


Figure 426: SOFAS with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using mean model parameter values and transformation of out of range predictions to upper and lower bounds

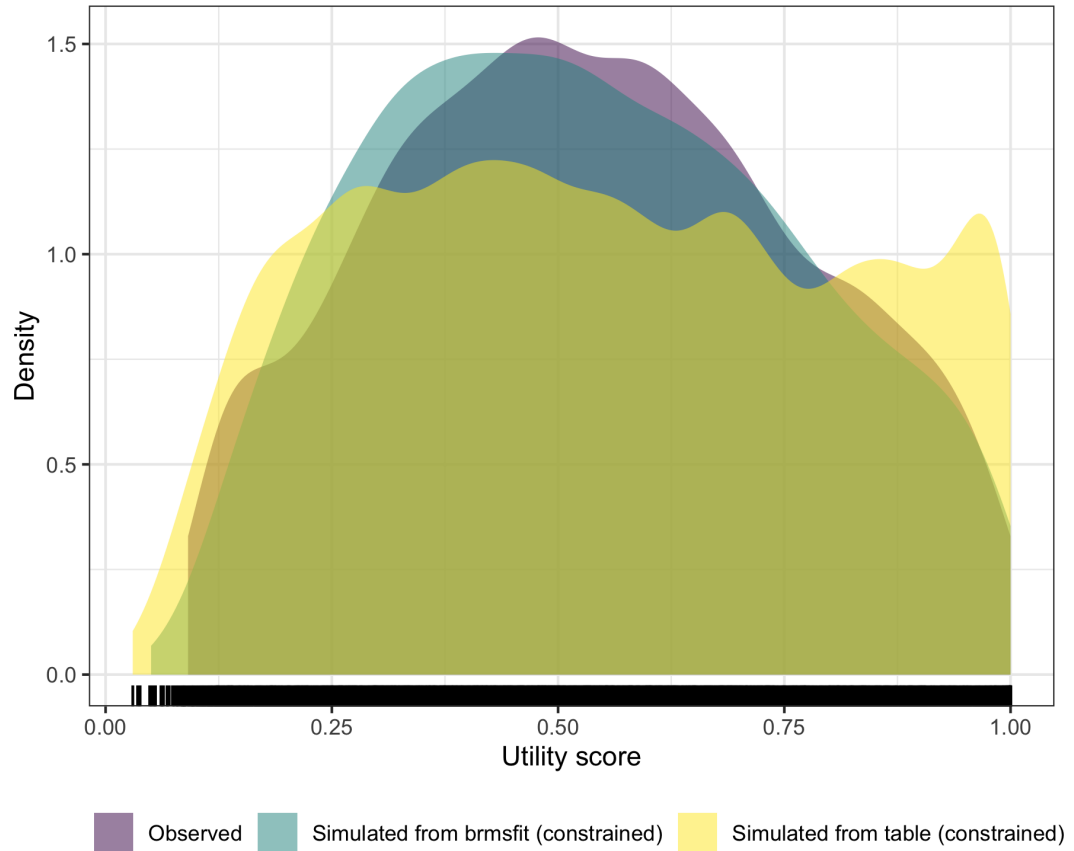


Figure 427: SOFAS with dgender linear mixed model with complementary log log transformation comparative densities of observed data and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds

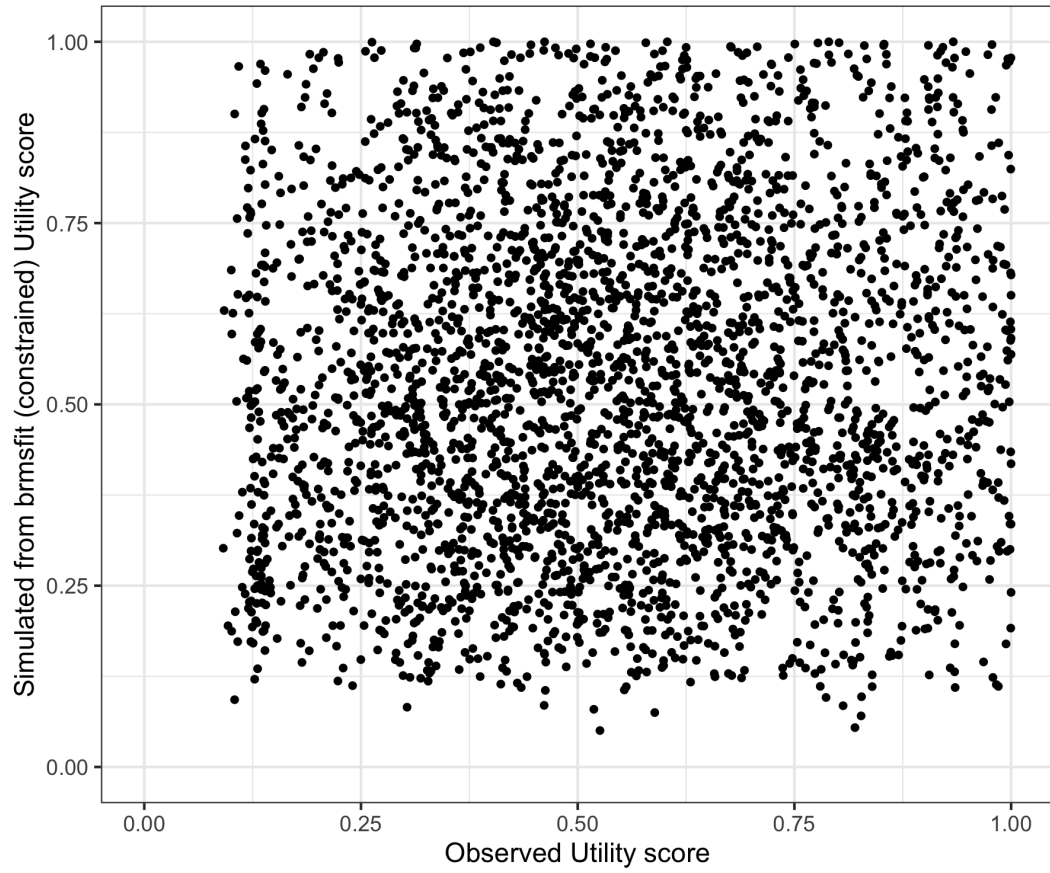


Figure 428: SOFAS with dgender linear mixed model with complementary log log transformation comparative scatter plot of observed and predictions using sampled model parameter values and transformation of out of range predictions to upper and lower bounds